J. Wallace

THE SOUTHERN AGRICULTURIST, HORTICULTURIST,

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A. E. MILLER, *No.* 25 *Broad-street.*

Sept. 26.

THE SOUTHERN AGRICULTURIST.

(NEW SERIES.)

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DRAINAGE AND IRRIGATION.

WATER is a necessary agent in the production of vegetation: the redundancy of water is scarcely less deleterious than the entire absence of it on any piece of cultivated land. Where the water stands a large part of the year, upon and near the surface, the production will be little or nothing. Lands drowned in time of rain and wet, often in time of drought suffer as much for want of wet as the most dry and porous soils. The difficulty with much of this land is, that there is no action of the soil but upon a very thin surface, because the standing water in spring and fall hardens all to the surface, and as soon as the dry weather succeeds, the corn and potatoes droop, and sometimes wither and die. So in any sunken swamp which may not be flowed and drained at pleasure, the water stands a part of the season, leaving only a chance for the growth of wild grasses, while the continued absence of rain in the summer months, leaves the swamp itself high and dry, and the growth of the poor vegetation is weak and stunted.

The land thus rendered little better than waste, possesses the elements of more fertility than much of the upland. Drainage and submersion are the two great principles to be brought into use on such land.

1. *Drainage.*—There are many swamps in most towns, that may be very easily drained by ditches depening the natural passage of the water. In some cases, a single ditch will carry off all the water that may be required. Lowering the water one foot in some instances may be sufficient: the mud in swamps that have been submerged for ages, may be brought into action as the best of soil, yielding hay and other vegetable productions for a long time almost without the aid of manures. If cold springs come in near the edges, these may be cut off and carried away by means of ditches filled in with rocks that are often found near at hand; or where rocks are not to be found, the logs and stumps dug from the swamp may be used in the place of stones, leaving apertures in the drains for the water to pass off. Large swamps are by these means reclaimed, and a vast quantity of the richest soil brought into use.

Of the hard lands continually suffering from surface water, there are thousands of acres that may be changed entirely by drainage: when an under-drain cutting off cold springs, and receiving the water from the surface is once made, the ground or subsoil may be stirred below; and the deeper we go less than eighteen inches or

two feet, the greater will be the capacity of the ground to produce. Even stiff clayey soils may be drained so as to become light and permeable. The action of stimulating manures upon such grounds, often brings out of the ground giant vegetable productions.

In the cultivation of lands, whether they be wet or dry, the stirring of the subsoil or deep ploughing is always of great advantage. The ground cannot be stirred too deep. It is true the turning up of mere cold sand, or gravel, or clay upon the surface, and the burying deep of the vegetable mould already upon the surface may injure present crops; but the stirring of the under-soil, while the vegetable mould is kept above, will always be of advantage to the crops. In some instances, crops are doubled simply from the moving of the under-soil: this is often done in gardens by trenching, taking care to keep the mould upon the surface.

Whether the ground be dry and porous sand or gravel, of whether it be stiff clay or loam or gravelly pan, the moving of the ground is always advantageous. It leaves an ample field for the roots of the crops. If the season be very dry, the roots seek the moisture deep in the stirred ground: if it be very wet, the superabundance of wet settles off at once into the deeper stirred ground —so that vegetation in ground thus prepared better stands both drought and wet.

2. *Irrigation.* Strange as it may seem, that although cold water kills and destroys the crop if suffered to stand long, so it invigorates and stimulates when it passes over or lays for a short time upon the surface. The effect of the wash of roads and from other sources, upon moving grounds is often seen. Tons of hay are produced in a succession of years where little or nothing would grow without this wash. Every good farmer will take advantage of all these sources of gain. The idea generally is that the increase of production results not so much from the water as from the fructifying materials brought along with it—the droppings of cattle, sheep, swine, &c. But if we reflect a moment we will perceive that the amount of these droppings, &c., is by no means equal to the effect produced. The simple cold water running from a spring, flashed over ground in the spring and fall, will have nearly as great effect as water washed from roads. The washings from the melting snow or from the spring or fall rains is as good and as strong a stimulant as the earth will at any time require.

The hilly grounds of New-England, the lands of small rocks and hard pan, as well as the lands of deeper, richer mould, are very favorably situated for irrigation. Every part of a man's farm may be overflowed where there is a high spring near it, or where water from the melted snow or rains may be collected into a stream above. At little expense the water in the spring may be flashed over an extensive side hill; where this can be done annually, there will be little need of frequent ploughing and manuring; and whenever either or both are resorted to, the flashed water coming

in aid of the other stimulants will have its greater proportionate effect.

Extensive meadows drained in the manner we have described, by means of a dam, might be submerged for a short season in early spring or after the crops come off in the fall for a few weeks to great advantage; the complete drainage afterwards will leave such ground in the very best condition for the growing of crops.

In the month of April last, while on a journey through Massachusetts, our attention was attracted to a conical field belonging to Doct. NATHANIEL PIERCE of Ashburnham: the frost had not yet been extracted from the ground; but this little hill was clothed in living green much in advance of the grounds around it. We went early in the morning to ascertain the cause of the difference. A brook run down a valley at the foot of the hill, where the effect of the superabundance of water had been the injury in the lowest ground rather than the benefit of the grass crop. Dr. P. with very little labor had turned the course of this stream, which was always nearly dry in summer, to a point as high as it could run upon the conical field. In several channels one below the other winding round the hill, the water was carried. The channel was such a one, as might be made with a common sward plough with the furrow turned upon the lower side: through the bank at short distances small crevices were made for the leakage of the water. With very little labor these were stopped up and new ones made at pleasure, so that the water by this extra attention was made to do its work over the whole surface.

The field on which this experiment was in operation, we were aquainted with from a child—before we knew the State of New Hampshire. In the rough point of that town which is very stony, like most of the high ridge towns between the Merrimack and Connecticut rivers, it was one of the fertile hills which might be cleared of rocks and ploughed. Fields thus cleared embracing only a small portion of the whole land, have generally been kept under the plough for the longer portion of the time. Now and then they are laid down to grass and continued for two or three years. With spare manuring, they cannot long be kept profitably in grass. Dr. P. informed us that this field had not been ploughed for about ten years; that he had irrigated it partially for the last seven years, and *that the crop of hay had been doubled.* This season the prospect of the crop was as good as it had been in any previous year.

Doct. Pierce, so well pleased with his first experiment, was extending the water spout upon this cone to mowing fields below with great success. This pure cold water process, as far as it was carried on, made abundance of hay, and of itself created a material for making manure that would soon bring a farm to its highest point of cultivation.

In whole countries in South America, the Agriculturist depends entirely upon irrigation, there being no rain through the growing season. Where the waters of the river can be taken out and flashed over the ground, immense crops of grain, rice, &c. can be procured—where no water can be brought the grounds are barren. This we have been told, is the condition of the country in Peru and Chili, from the feet of the high Andes to the Western or Pacific ocean.

In the United States we are happily not reduced to that position: we have here alternate rains and shines; but we do not doubt the time approaches, when irrigation will be here introduced among those grand agricultural improvements which the spirit of the times call into action. *Farmer's Monthly Visitor.*

THE COMPOST YARD.

In a recently published Scotch work on Agriculture, demoninated "the Book of the Farm," there appears a drawing and a description of the "COMPOST YARD," an enclosure distinct from, and yet closely connected with, the farm or barn-yard, and in which is situated a tank or sunken cistern, for the reception of the urine from the horse stables, cow and ox stalls, and the range of hog-styes, into which it is conveyed by under drains, so that the rain which falls in the yard does not flow into the tank, to weaken the liquid, or to overflow it with an useless article. Into this compost-yard is brought, at leisure times, large quantities of muck, virgin-earth or bank-soil, upon which is poured from time to time, as it is collected, the urine from the cistern. Several of these heaps are in preparation at the same time, and so soon as one of them becomes sufficiently saturated with the urine, it is turned over and carefully mixed, the clods being minutely broken and pulverized. And if, at this stage, lime is added and intimately mixed by turning, the mass will be found equal in value to soaper's ashes; by far more lasting in its effects, adding *staple* as well as *vigor* to the soil, and manufactured at an expense much less than by any other mode that can be devised; the urine in such an establishment being equal in value, and preferable for many purposes, to the more solid parts of the dung of the stables. By these very simple means, the resources of a farm can be doubled, while the labor attending the manufacture might be carried on at a time of leisure, affording profitable employment at all seasons of the year. And this mode of expending the urine of an establishment is far better than that which in some places is in use, namely, to carry it abroad in water casks and sprinkle it on grass lands while the crop is growing; for on some occasions it has been found, to say the least, almost useless, while in its concentrated state, it would prove in other cases injurious. One could easily imagine a tank, with a

pump for lifting the liquid into an upper cistern, from whence it might be conveyed by means of a hose-pipe to any given distance, and to any part of the heaps where required; and thus, by the labor of a couple of hands for an hour or so, the contents of the cistern could be equally distributed over large quantities of earth, upon which more muck might then be spread, and the urine be again applied, so as at length to form heaps of compost of great magnitude, in a fit state to carry abroad as top-dressing to medows, or clovers, or suitable for any other purpose.

The solid contents of the farm-yard and stable manure, could then be carried into the fields, and there be composted with other bank-earth, or the clearing of hedge-rows, &c., or the earth obtained from the lower parts of a field, where is often to be found large quantities of the richest part of the soil, brought down by the washings of rains from time immemorial, and which only require to be composted and taken back to those parts from whence they have been brought, to render the land uniform in its produce, and enabling it to double the quantity of its yield. At the same time, great labor might some times be saved in the article of *carting*, if care were taken to make the arrangements to carry the compost *down hill*, instead of *up the ascent*, and this might often be done, by taking the earth from the lower side of the field, *above* that on which it is intended to carry it abroad, removing a set of bars here and there, to render ready access to the field below. This I have often been enabled to do, at a saving of more than one half the labor in cartage: and it behoves the farmer to consider well before commencing his compost heap—by an examination of the locality of his fields—whether such an arrangement be not practicable; remembering, however, that the heap must be formed on a dry soil, for if otherwise, the fermentation going on in the mass, will draw up the moisture from the lower earth, and render all the operations difficult, laborious, and disagreeable; the character of the compost will be changed, and its fructifying principle deteriorated in a remarkable degree. The wholesome and refining process of fermentation, being checked and rendered abortive by the chilling influence of a too great abundance of moisture, the compost will become cold, heavy, and adhesive, powerless in its effects, and rather a dead and putrid mass, than a warm and invigorating substance. This consideration is therefore of paramount importance to the success of the undertaking; and yet, how often have I seen a compost-heap placed in a cold, wet, low and shady corner of a field, liable to be overflown by freshets from a neighboring stream, or even by the effects of a heavy rain. But no practical man will be in danger of committing the error, if he have once assisted in turning a heap placed in such an unsuitable sitnation, the wet and heavy foundation of which will have taught him a lesson he will not be likely soon to forget.

VIR.

June 27, 1842. *Farmer's Cabinet.*

MANAGEMENT OF COTTON.

Messrs. Editors,—A number of my fellow-citizens having signified a wish to know in what way I managed my cotton, in order to obtain the prices which I have received for the last few years, I hand you a statement of the same for publication in the "Farmer."

In planting, I take care to plant not exceeding five acres to the hand in cotton. This I cultivate well, and I have actually made a bale or more to the acre, on my lands that had been in cultivation ten years without a single year of rest, or without any thing being planted except corn or cotton. This, of course, was when the seasons were most favorable.

Before the time for picking commences, I prepare all things for operating efficiently; and whenever I can get fifty or sixty pounds per day to the hand, I go to work,—The maxim of "making hay while the sun shines," is strictly applicable to gathering cotton, if we desire the finer grades. And several years' experience has confirmed me, in the opinions set forth by Dr. Nutt, in the "South-Western Farmer," to wit: That "it is impossible to make fine cotton of that which was suffered to remain in the field for any length of time," &c., and more particularly so during wet weather. I consider a light rain injurious, a heavy one still worse; but a long rainy season I think almost ruinous to the open cotton. I am also an advocate for drying cotton well—for which purpose, I sun the whole of my crop that I gather early, whether there is any dew or not. When the fall is very dry, and the cotton that is open appears sufficiently dry, that which I pick in the afternoon I have thrown in a bulk in my gin-house, or in a separate cotton-house from that which has been sunned and picked over—and when it is too wet to be picked from the field, I have hands taking the trash, hard locks, &c. &c., from that which has not been sunned. But I am particular in keeping a hand at the scaffolds to stir and dry the cotton well, and to take from it all objectionable substances. In some seasons that are favorable, there is but little time lost in drying and "thrashing" cotton—again, some seasons, it requires considerable labor. Last season was one of the worst that I have encountered since I have turned my attention to this matter; yet my whole crop sold in New-Orleans in the latter part of April, at 12½ cents, one bale excepted, which opened in my lower lands after the heavy frost 1st of November. This I did not put in my own proper brand; it sold for six cents.

I recollect, some nine years since, a friend near Utica, in this county, put his cotton up damp, (from carelessness) When he went to ginning, it was, as he said, too hot to handle comfortably; but after stirring and turning it freely, it soon became dry and ginned admirably. He carried it, I think, to the Grand Gulf market, in company with a near neighbor, who had taken more pains in hand-

ling his crop; but heat had givem the "cream color" to the first named lot, which they both agreed sold for a cent per pound more than the better cotton; but I have never heard of that gentleman trying to "cream color" his cotton by heating since; for he said he considered the staple perfectly rotten; and although Mr. Wm. R. Campbell might have been deceived by cotton that had a fine appearance, I am inclined to the opinion that whenever the manufacturer tries such cotton to his spindles, he will not give as much for the brand as he will who buys Dr. Nutt's and my own.

My last three crops have all been sold to the same gentlemen, as I am informed by Messrs. Ruff & Newman, my commission merchants in New-Orleans. My gin rags are 9 inch diameter. I thought they were less, until this day I measured them. My gin saws are six to the inch; the grates are straight; and the saw enters them perfectly straight,—thatis, heel and point at the same time; no false grates; no extra flue—each of which would doubtless be of service.

I have given you as full a detail as I have thought sufficient for those who are desirous to experiment upon my plan of managing cotton, and if I shall have found hereafter that any one has been benefited by my little experience, I shall be more than compensated for this rough statement.

Wishing you, gentlemen, health and prosperity, I remain most sincerely yours, R. COLLINS.

Near Auburn, July 18th, 1842. [*So. Western Farmer.*

HORSE AND MULE POWER.

The subjoined comparative view of the relative value of *horse* and *mule* power, is written with that happy admixture of good sense, deep thinking, and raciness of diction, for which its author has always been so justly admired. His views with regard to the superior economy in the use of the mule, over that of the horse, are as just as they are eloquently expressed.

ON THE COMPARATIVE ECONOMY AND VALUE OF HORSE AND MULE POWER.

BY J. S. SKINNER.

Communicated for the American Farmer.

Review of the Premiums offered by the Agricultural Society of Prince George's County, Md.

For the best Jack, $5—*For the best Jenny*, $5—*For the best pair of Mules*, $5.

The prejudice against the Mule, seems to be as inveterate as that which impels the "heel" of every son of Adam to "bruise the serpent's head;" whether it be the head of the innocent water or the harmless black snake, or the viper or copper-head, bloated with

poison. Does this aversion to breeding mules owe its origin too, to a divine command—"thou shalt not let thy cattle gender with a diverse kind?" But the same prohibitory command addressed to the Jews, forbade also, the "mixing of seed," yet who deems it therefore unchristian to mingle the seed of clover and timothy?

Instead of this invidious distinction by the Committee, in favor of the Horse, offering the highest premiums for that very expensive animal, in all his ages, forms and sexes—young and old, quick and slow, male and female, it were better, we should think, to have held up the highest premium to him whose *Mule power* should bear the greatest, and *Horse power* the least proportion, the one to the other, in use on his plantation! As for rewarding the mere exhibition of the "best pair of Mules," what length of merit can be discerned in that, unless it be that it implies length of purse to give the highest price? If driven to the ground in the owner's own carriage, in lieu of a pair of $500 Vermont Horses, that would be quite a different matter.—The mode of taking the last *census* was very defective in many respects: For example, it only gives us the number of "Horses *and* Mules" in the aggregate; while here, at once, is an agricultural problem which requires for its investigation that we should have accurately and separately stated the number of *each*.

Twenty years ago, it was estimated that the Horses in England, consumed the product of twenty millions of highly cultivated acres; and Sir John Sinclair calculated the keep of one horse to be equal to the product of five acres. Let us suppose constant work to be provided, as it should be, for every horse that is kept on a plantation; do not true economy as well as humanity and justice demand, that each horse so worked should be well fed? and if so, may not each Horse be estimated to consume, at 2½ gallons a day, $56 of corn. Add to this, $14 for other provender and shoeing and physicking; and you have an outlay of not less than $75 a year for every work Horse, to say nothing of idle brood Mares, Colts, carriage horses, and other *non-producers;* a sum for each horse equal to the purchase of a first rate Mule, while the average life of the former will not more than half equal the latter.

Among planters in the South, whose position and circumstances are so identical with those of Maryland, the economy and advantages of the Mule, over the Horse, are universally admitted. The Reports of an Agricultural Society of South-Carolina, in relation to this subject, may here be quoted, where it asserts: "The Mule is more easily raised than the Horse, more able to bear heavy burdens, equally strong for the draft, more patient, equally docile, will live twice or thrice as long, capable of enduring much more labor, will do as much work in the same time, and will not be more than one half the expense, as they will not eat more than one half the grain, will make use of long forage which the delicacy of the horse will reject, and will bear the heat full as well, perhaps better."

Should not these considerations induce Planters to ponder and reflect how far it is expedient to aggravate, by their highest honors and rewards, that natural and costly predilection of our countrymen for Horses, which may be said already to amount to a passion —one which had its origin in deeds and days long past of

"————Christian service and true chivalry;"

But no more congenial with this utilitarian, money-saving age of ours, than would be the vagaries of the Knight of la Mancha himself.

The last census gives for Prince George's County, Md., 4,648 Horses and Mules. This we believe to be much short of the real number. The aggregate of both for the State is returned at 92,220.

It is not extravagant to assume that 60,000 horses in Maryland, might be well superseded by Mules, and taking only ten dollars as the clear saving for each, here would be a reduction of annual expenditure—in other words an increase amounting to 600,000 dollars, equal to the interest on the State's debt.

In all steady continued draft, as in threshing, grinding, and other machinery, now so much in vogue, the excellence of the Mule is most remarkable, and especially in his less liability to gald—an evil to which the Horse is peculiarly subject, where his locomotion in harness is *circular*. On their value in service that consists of constant, steady hauling, an extract may here be made from some editorial remarks, in an old volume of the American Farmer, then conducted by Mr. Skinner, now of Washington. Speaking of the decided preference given by the late General Ridgely, of Hampton, to the Mules in the heavy hauling connected with his iron works, it is observed: "For some time the General indulged an old servant in keeping a single team of Horses, but it was found that the Mule teams performed their day's journey, hauling equal weight, sooner than the Horses by an hour; and the greater value of the Mules has been so well established, in the course of his ample experience, that they have superseded Horses, with entire conviction of the great saving accomplished by the change. This information first derived from his manager, Mr. Green, was fully confirmed by the General himself."

Why then, let it be repeated, in reference to these two animals, make fish of one and flesh of the other?—offering $76 in premiums for the Horse and $15 only for "Jack, Jenny and Mules?" and that too under the authority and sanction of gentlemen who cannot be too much admired for their public spirit and honorable intentions; nor too closely imitated in their individual practice and general management?

As to the more general use of the Mule in light harness for the road, the common impression is, that he cannot be made to *travel fast enough*. Nobody likes rapid motion more than the writer of these crude but well meant and respectful strictures; and he

would take leave to inquire, who has given to this neglected hybrid, a patient and fair trial, to see how much his speed may be improved? Let it be considered how long it takes to bring a crack trotter such as Ripton or Confidence, to his best! Hiram Woodruff or Bill Wheelan, the American Chifney's among trotting jockies, never think of taking a Horse in hand, to train him for this pace, until after he reaches his sixth or seventh year; and can hardly be said to get to their best work until they fall into their teens—Old Topgallant performed his *chif d'œuvres* after he was twenty! When the Mule has been in like manner taken up, and systematically trained for the trot, and it is found that he cannot be driven at the rate of eight miles an hour, it will be time enough to pronounce him impracticable in that pace; but the writer knows him to be master of that rate, for he has ridden with two others besides General James Shelby, who drives nothing else in his private carriage, from Lexington, out to his magnificent blue grass farm, eight miles from Lexington, behind two Mules of about 15 hands, within the hour, and without a touch of the whip; and learned from the General that he had driven a pair to the Blue-lick, a distance of forty miles, in six hours, stopping one hour on the way.

In lieu then, of some of the premiums bestowed on breeding stock, to give animals of slow draft, and on sucking colts, would it not be more politic to lend the countenance of the Society to the rearing and more general adoption, for the road as well as for the field, of a more economical and enduring animal power? might not a premium be well offered in the shape of a set of *knitting needles* in a silver case, or a butter cooler of ground glass, with a cow reposing on its silver lid, to the wife of the Planter who shall accompany him to the cattle show, in a light carriage drawn by the pair of *best broke Mules?*—to the *wife*, because it is doubtful whether, without her ladyship's consent, this great disideratum in rural economy ever can, or perhaps, we should add, ever *ought to be achieved!* Were it to be imagined, that the fact would have any weight with our republican housewives, it might be added that the medals struck in honor of Agrippina, a heroine whose life was adorned with the most noble virtues, bear on them the image of a Mule; and a gentleman at my elbow reminds me, that he has seen Charles the Xth, setting out for his Royal Palace at Fontainebleau, 13 leagues from Paris, driving six splended black Spanish Mules of Andalusian blood! But it would be a libel, of which I should never be guilty, to suppose that an American Matron could be influenced by any motive so strong, as her ambition to promote the independence of her husband; and to set to her friends and neighbors an example of economy and good sense.

"Whoso findeth [such] a wife, findeth a good thing."

American Farmer.

OXEN IN HARNESS.

Mr. Editor,—Is there any reason why oxen should not be made to work in harness as well as in yokes? I have repeatedly asked this question, but have never yet met with a valid objection to the *innovation*, as it is termed, although much has been urged and strenuously insisted upon, on the ground that it would be found impracticable and impossible. I am not, however, convinced that it is so, but rather, I feel quite certain, that the substitution of collars for yokes would be advantageous in every way both to man and beast. The subject has of late been impressed on my mind, by witnessing the extreme awkwardness of the adaptation of the yoke to the plough, as well as to several other labors to which the ox is devoted; but in which his motions and freedom of action are reduced almost to a piece of machinery, by the everlasting yoke upon his neck, oftentimes a weight of itself sufficient for a load for a single beast; and to which it is customary to add half a hundred weight of iron—merely, I presume, to ascertain how much the poor brutes can be made to bear up against. I was present a few days ago at a discussion of the subject, and would place the arguments for and against the yoke on record, so far as I can remember them.

C. I wonder why oxen cannot be used in collars as well as yokes?

D. Oh, they would not be found to do at all.

C. Did you ever see the trial made?

D. No, but I know it would never do.

C. Well, I have seen it tried, and it was found to do exceedingly well. I wonder who first thought of putting a yoke, the size of a tree, upon the poor animals necks for them to push up against?

D. Don't you see it is an ordination of nature—the bump of the neck being made on purpose to receive the pressure, like a natural pad.

C. Exactly the argument which is used by the inhabitants of the islands of the Hebrides, for hitching their horses to the plough by their tails! "What else," ask they, "is the tail made for? It is an *ordination of nature;* there can be no question about it." But I cannot see that nature or reason has any thing to do with a practice so cruel and bungling.

D. Oh, I have no doubt that upon trial it will be found the best and easiest method of fixing it; however, I have never seen or heard of any other till now.

C. At page 162 of the Cabinet, vol. 2, it is said the French method—that of drawing from a board strapped across the forehead, has been found far preferable to the yoke, the cattle being easily broken to the method; stepping out very light and free; and although sorely pressed by way of experiment on a broiling summer's day, they worked quite easily, in a labor that would have sorely distressed them if in yoke, each ox working separately.

D. But that is not in collar, as you recommend.

C. True, and is not near so complete; for there too each animal would be separate, after which it would enjoy the freedom of its head as well as its neck. Only think for a moment of the weight of a broad, thick piece of wood, the length of the thickness of its carcase, the stuffing and strapping, besides the iron hooks for the traces to be hitched to, all hanging at the forehead of the poor beast, for ten hours a day!

D. Oh, they don't mind the yoke when they get used to it.

C. No more do eals mind skinning when they get used to it. But who told you they do not mind it? I guess that custom never would enable us to bear any thing so frightfully painful, wearisome and inconvenient, as a yoke on our necks for so many hours without complaining, if we had the power to express ourselves.

D. Well, did you ever see oxen work in collars?

C. Repeatedly; a great many teams, both single and double, come daily into London from the surrounding country, and traverse the streets, both in carts and wagons, with the greatest ease and convenience, exhibiting all the tractability of the horse, and the same power of putting back the load and of going forward; with blind bridles but without bits in their mouths, and collars stuffed in a different manner from those of the horse; opening on the top and confined with a strap and buckle, and their feet shod with double shoes; in which state they are equal to horses in a l but pace; as easily guided and in every way as convenient. And at plough, they are a thousand times more convenient in collars than in yokes; turning at the ends of the land in half the time and with half the labor, and going through a day's work with half the exertion.

D. Well, I don't see the use of changing what has been in use for so many years.

C. Then, of course, you still adhere to the tinder-box, and flint and steel, and have not "changed" them for a box of Lucifer matches.

D. Oh, but that change for the better was so apparent.

C. To me, not half so apparent as the change from the yoke to the collar, because of so much more importance in the saving of expense and suffering.

D. But the yoke is so much cheeper than the collar and harness.

C. True, and I am willing you should debit every crop which you raise by their means, with an extra two cents per acre—that being, I calculate, about the extra expense incurred, and which would cover it.

D. Then it is so much more labor and trouble to gear up with the collar and harness than with the yoke, that I guess I shall go on as I am.

C. Yes, that is exactly the conclusion to which I expected we should arrive, for to that point have all the arguments that I have heard, come at last; and but for the shame of it, it would no doubt form the first objection to the substitution of the collar for the yoke.

VIR.

Farmer's Cabinet.

FEEDING ON COTTON SEED.

In your valuable number of the 8th inst., I read some suggestions from a correspondent and from yourselves, in relation to feeding on cotton seed; and as neither of you have mentioned the plan, upon which I think they can be most usefully prepared, I will give the result of my experience and my plan to the public.

I have a large kettle, which holds from 5 to 6 bushels, set upon a brick furnace, (which is less than one day's work for a mason to make.) I fill my kettle with water, and boil something less than half an hour. Then empty the seed into troughs, and let my cattle and hogs to them. The milk and butter has none of that cotton-seed taste, which the green or uncooked seed give. Both cattle and hogs will keep in good order, winter and summer, on seed thus prepared; and when you are ready to fatten pork, you have only to add an equal quantity of cotton seed and corn, and boil as above. Experience has proved to me that it will fatten sooner, and be equally as good as when fattened on corn alone. Your cows will give an abundance of milk all winter, when fed in this manner, with but one bushel of corn to four of cotton seed.—Every one is aware of the advantage of boiling turnips, turnip greens and cabbage for the human stomach. The boiling of cotton seed is not less advantageous as food for stock. Besides there is great economy in feeding seed thus prepared. By the usual method of feeding, there is more than double the quantity of seed wasted than are consumed by the stock.

So far as I have heard, every person who has ever tried this plan, has been well pleased with it.

Very respectfully,

D. O. Williams.

Near Clinton, April 28th 1842. *So. Western Farmer.*

STRAW.

How can I make my cattle eat straw? I have often asked of some experienced farmers. "Give them less hay," was the general reply. Not liking this mode however, and knowing that good farmers in England and this country, made free use of straw as food for cattle, I resolved last summer, when threshing, to change my plan. I stacked it as usual, but in the progress of the work, sprinkled on from one to two bushels of salt. I used the "Pitto Thresher," which gave me the additional advantage of mixing the chaff through the whole. Well, during the warm weather in the first part of last December, my cattle, instead of wandering about with but little appetite, might be seen any day eagerly engaged in filling themselves with straw. At night, when the cows were tied up to receive their roots their hay would be almost un-

touched. Their rotund appearance left me no apprehension of their starving, however. This was continued until about the 22d December, when I was obliged to reserve the remainder of the stack, for the use of the stables. Nearly a month's feeding of hay was saved. W. R. S.

KENTUCKY BLUE GRASS PASTURES.

Mr. A. B. Allon, in a late number of the *American Agriculturist*, gives the subjoined account of the Kentucky Blue Grass, and the parks in which they grow.

The great boast of Kentucky is her blue grass pastures, and of these, she certainly has great cause to be proud. It is grass that admirably suits the climate, and this fertile calcareous soil, clothing it with the richest and most nutritious feed, and when left from the month of August to grow through the autumn, it attains sufficient height before cold weather sets in to protect itself, and thus grows on all winter, affording the stock turned in upon it, except when covered, as it will be occasionally for a few days, with snow, all the food they may want, to keep them in good heart till spring.

Parks.—As the country was cleared up, the settlers had the good taste to leave what they here call woodland pastures, that are made merely by underbushing among the original forest trees, and sowing the ground to grass. These lend a sort of grandeur and relief to the landscape, giving it great beauty and variety, and and equal in appearance, to the noblest parks of England. They protect the cattle from the cold blasts of winter, afford them a grateful shade in summer, and preserve the grass green and growing during the hot season, causing the pastures to produce more than grows in the open fields that are left entirely open. Groves also of the Locust are allowed to grow up for the same purpose, and to furnish timber for building and fencing stuff.

PLANTING SWEET POTATOES.

Mr. E. D. Kent, of our vicinity, has for a few years followed a plan of cultivating the sweet potatoe which for facility and saving of labor, we think is superior to the mode usually followed. He first breaks up his ground deeply and thoroughly—then runs a furrow at the upper distance, plants his seed—and covers by throwing or lapping two ridges over them. As soon as the plants attain a little height above the bed, he runs additional furrows, throwing the earth to the ridges so as not quite to cover the vines, yet cover all the grass, which may have sprung up on the sides of the ridges; this he continues till his ridges are sufficiently large, by which time the vines will spread over the ground so rapidly as to keep down all grass and weeds. He gathers his crop too with the

plough—taking away enough for his family use and leaving the rest to be rooted up by his hogs. All his killing hogs, he fattens on sweet potatoes in this way, merely giving a little corn as a finish to harden their flesh.

By this plan, all the labor of throwing up ridges by the hoe, preparing to plant, scouring and scraping out is dispensed with—the hoe not being at all—and the crop not diminished, he thinks, in yield. The plan, it will be perceived, is nearly identical with the common method of cultivating the Irish potato; and as the two roots grow very similarly—both being formed on the shoot or sprout and not on the original potato planted—we see noshing in theory to prevent the method from being adopted as the cheapest plan of cultivating this most valuable root. [*So. Western Farmer.*

CULTIVATION OF TURNIPS.

Their value to the Farmer—how to prevent their imparting their flavor to butter—remedy for the turnip flea, &c.

In our May number, we advised farmers to make preparation for planting a suitable portion of ground with the ruta baga, and gave short directions for preparing the land for that crop,—and we now proceed to redeem the promise then made, to discuss the subject at length in this number; and first, in relation to the cultivation. As stated in our last, a fresh clover ley recently ploughed, answers a good purpose—or if an old sward is to be broken up, it should be done in the fall so as to admit of being cross ploughed before planting. The reason for this is obvious. Turnips require a mellow soil, and a tough sward will not decompose so as to become mellow and fine without considerable time,—and even if left through the summer, will become hard, unless again stirred with the plough, while a clover sod being thickly penetrated, with the top roots of the clover is easily pulverized with the harrow, and may be prepared for the crop immediately after ploughing. The ground after ploughing should be well harrowed, both ways until a fine tilth is obtained, and the seed planted immediately in drills three feet apart, and very thick in the drills. We have always considered the drill harrow indispensable in the planting of turnips, as the labor of planting by hand is very great; but an Englishman in our employ, says that an ox horn with an aperture at the small end, sufficiently large for the seeds to pass through, may be used to advantage, by carrying it directly over the mark for the row, and rapping with a stick held in the other hand. This is the way in which a great proportion of the turnips are planted in England,—and we mention it here in order that those who have no drill at hand, may avail themselves of it. It is said that several acres may, in this way be planted in a day. The after culture, consists in dressing with the cultivator as soon as the rows can be

followed, at the same time thinning the plants to from twelve to eighteen inches in the rows, and cleaning out weeds and grass with the hoe. The dressing with cultivator and hoeing should be repeated twice, after which no more care will be required until harvest.

As to the value of turnips for feeding stock, there is a great diversity of opinion,—and it is probable that there are some who place too high a value upon them; but we think by far the largest proportion do not properly appreciate its value. After several years experience in the cultivation of this crop, we think we are warranted in saying, that the farmer who has a suitable soil, will find the ruta baga quite as profitable as any of the crops raised on his farm. We are the advocates of root culture, to a greater extent than is generally practiced by farmers—because we think it an excellent preparation for succeeding crops, and because we believe that a larger amount of food for stock may be grown on an acre in roots than if devoted to grain or grass. Compared with the potato, the turnip produces about two to one,—and we think that eight or ten bushels of turnips may be raised as cheap as one of corn. We would not, however, advise farmers to cultivate this root to the exclusion of others, but ask for it a reasonable proportion of attention.

The soil best adapted to the growing of the ruta baga, is a dry sandy or loamy,—and upon such soils well prepared by cultivation and manure, from five to seven hundred bushels, is a fair crop—although eight, ten and even twelve hundred bushels are said to have been grown on a single acre of land. It has often been said by farmers, who have given this root a partial trial, that it is entirely worthless for feeding stock,—and we have heard of an individual who professed to have given it a fair trial in a large stock, who said he would as soon tie his cows to a snow bank, as think of feeding them with turnips.—We are at a loss to account for the prevalence of such views among farmers, but believe them to have originated from imperfect and partial experiments,—and because they have not realized *all* the benefits which some of the friends of turnip culture have claimed for them, they denounce it at once as worthless and unfit for feeding stock. We ask from experience, and after a fair trial of their merits, when we say that for feeding stock of any kind in winter, and particularly through the spring months they are of great value. Our cows have never failed to give an increased quantity of milk when fed on turnips.

There has, however, been one inconvenience in feeding turnips to cows giving milk, in consequence of the bad flavor which is sometimes imparted to the butter. Giving the cows daily access to salt, has been recommended as a preventive, but has not always proved effectual. In conversing with a Scotch farmer upon this subject, he stated that a small quantity of saltpetre put in the cream just before churning, would entirely prevent the taste of the turnip.

This method he said was practiced almost universally in Scotland, where turnips are raised in great quantities. We have since fully tested the efficacy of the prescription, and find it to answer the purpose—the butter made when cows were eating half a bushel per day, being entirely free from the flavor of the turnip. Whether it can be relied on at all times, further trial must determine.

Before closing this article we will again urge upon farmers the necessity of complete and thorough tillage, in this as well as other crops,—and with proper management, success will generally crown the efforts of the farmer. C.

[*Central N. Y. Farmer*

WORCESTER PLOUGHS.

Messrs. Editors,—In the April Number of the Cultivator, I took the liberty of calling the attention and recommending the farmers to look at some ploughs manufactured by Messrs. Ruggles, Nourse & Mason, of Worcester, Mass., on sale at the store of Messrs Pruyn, Wilson & Vosburgh, in State-street, Albany, which I am gratified to say was promptly responded to, and the sales have exceeded their most sanguiny expectations. And to show I "practice what I preach," I obtained one of their Eagle ploughs and put it immediately in operation, first where I grew ruta bagas last year, and since on a strong sward which it turned over twelve inches wide and seven inches deep, with two common sized horses, and with as much ease as three horses before one of our common ploughs.* Why, there is as much difference in its gliding through the soil, as there is between the sailing of a Baltimore clipper, and an old fashioned Albany sloop. I think the Eagle plough, for such a soil as I have to improve, far superior to any other I have ever had in use. I do not say this with a view to flatter, or from a wish to injure any one engaged in manufacturing ploughs, but on conviction, from *actual experience*, of its truth. Several of my neighbors have seen its performance, and assured me they had never seen such ploughing before.

Of all the implements of husbandry in use among us, there has been none susceptible of greater improvements than the plough; and from the great and laudable competition at present existing among manufacturers, (and which I think should be fairly encouraged.) I hope yet, if possible, to see this invaluable implement brought to still greater perfection.

It is now about sixty years since James Small made the great improvement, which consisted in giving the mould-board a curved figure, and made of cast iron. Previous to this invention, the

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* Since writing the above, I find in the last number of the Cultivator, I am supported in the opinion expressed of its execution and ease of draft, by one of the Editors who has one in use.

mold board was made of wood, straight, and covered with thin plated iron. It is only about seven years, since the writer of this was surprised to find some of this description of ploughs, still in use in Connecticut, between New-Haven and Guilford.

In respect to Small's improved ploughs, Lord Kaimes, who was a good farmer, said, "That no plough would cut the furrow so clean, or turn it so nicely over for receiving benefit from the atmosphere, and none so easily drawn." Could he have lived to witness the operation of the Eagle plough, I think he would have altered his opinion.

As much of our success in crops, depends in a great measure, on the proper breaking up and subsequent ploughing of our land; and as a good plough is therefore highly necessary, I confidently recommend the Eagle plough, as admirably calculated, for strength, durability and cheapness of repair, and it may be considered a most valuable acquisition to our catalogue of implements. It enters and raises the soil like a wedge, while a surface of polished metal of those parts which come in contact with the soil, lessens the friction. And here I would remark, that in the whole length and breadth of the mold-board, not a particle of earth was lodged, showing most conclusively, that it is formed on correct and scientific principles, and that they will perform their work with more ease to the team.

Farmer, if you have any feeling for your team, or regard for your corn crib, I again advise you to lose no time in furnishing yourselves with one of these ploughs. But to be honest, there is one objection to them, especially where there is more than one ploughman, on the farm, as each must be furnished with one, or there will be "trouble in the camp," and in the present depressed state of the times, it is no easy matter to raise the wherewith to purchase many.

If any one doubts what I have said, all I ask is to satisfy themselves by actual experiments; or if they will take the the trouble to call at my farm, I shall take great pleasure in showing the superior work performed with the plough. C. N. BEMENT.

Three Hills Farm, May 1842. *The Cultivator.*

[NOTE.—The ploughs of Messrs. Ruggles, Nourse & Mason, (of various size) have been vended for the last three years, at the Agricultural and Horticultural Repository, (vide: advertisement on cover) in this city, and have given general satisfaction, whether they have been used for turning under the stubble of our rice fields, or for the culture of upland crops.—ED. SO. AGR.]

"FREE MARTINS."

When a cow has twins, one of which is a bull and the other a heifer, the last is known by the name of free martin, and the general impression is that such are always barren. In a late note to us, J. Cope, of Chester County, Penn., says—"Having spoken last year to some of my friends, of two instances in which it was probable that heifers were likely to breed, both of which were twins to males, I can now state that they have both produced calves this spring. As it supposed by most people that this circumstance can only happen when the heifer was the larger of the twins, I have made some inquiries on this point. In the first case the female was decidedly the larger of the two; in the latter case, from what I could learn, I think there could be little doubt there was the same condition existing in the two, although the difference in size may not have been as marked as in the first instance." *Cultivator.*

THE MANURE HEAP.

Mr. Editor,—I wish to call the attention of those farmers who read the Visitor, to the importance of enlarging their manure heaps. There cannot be too much said and written upon this subject. Most of our farmers seem to be satisfied with what they merely make from the hay consumed in their barns, and do not even in this way always return to the soil what they have taken from it, for many who make no more manure than what the consumption of the hay affords, sell off a portion of the hay, and thus rob their field's own pockets.

If I may be allowed to lecture farmers a little, I would say—

1. *Make your hogs work.*—Many farmers are now-a-days looking out for the best breed of hogs to *fat easy*; but such hogs are not always the best for the farm, especially if it is run down. Fat hogs are generally lazy. Whether their corpulency induces laziness, or *vice versa*, I am not able to say; but of this I am sure, they will not work well. If you wish to have help from your hogs in making manure, get raw-boned, long snout fellows, that will plough a furrow six or eight inches deep. If you wish to have a fat one to kill, you might put one into the sty as a kind of overseer. By occasionally casting an eye at the laborers, and grunting and lounging, he would perform his office as well, probably, as many overseers of our public works, at two dollars per day.

But you must give your working porkers room enough, and stock to work over. If you have much near at hand, bring it to the yard. If you cannot get at that, plough up sods by the road-side, in your pasture lanes, and by your wall in the fields. Children may not like it so well as to have the raspberry bushes and blackberry vines ploughed up, but the hogs will be glad to work them over, and you will save having your grass trodden down. When

you get a good heap by the side of your hog-yard, throw in a little at a time, for if you put in a large quantity, they will get discouraged. If their *ploughs* get dull, so that they do not turn over the furrow well, dig a few holes and scatter in some corn or oats. If the hogs get the scent of your deposit, they will work over the whole mass.

Brakes and leaves may be thrown in to help loosen up the muck or sods. In this way you may do much towards enlarging the manure heaps. Every hog should make at least six cart-loads of good manure, and he will do it if you give him a chance

2. *Get Muck or Soil into your Barn-yard.*—I know of many farmers who are in the habit of drawing into their cow-yards, several loads of muck, or soil in the spring, and frequently ploughing it up with the manure which the cattle drop through the night. This is carried out in the fall on to the grass land for a top-dressing, being left in heaps till spring, or else thrown into heaps by the side of the yard, or in the middle, so that it may not be in the way of the cattle. Late in the fall another laying is spread on the bottom of the yard, for the stock to run over during the winter. Throw down a load or two under each window where you throw out your dung, and it will become so well saturated with mire as to be good manure in the spring. If possible, let all be thrown together in the spring, as soon as the frost is out; then let it ferment till it is time to draw it to you fields. It is a good thing to have the dung which the cattle make during the winter, under cover, as the rains waste the heap, and disengage a portion of the ammonia, which escapes into the air. Many are in the habit of drawing their summer manure in the fall on to the ground which they intend to plough the next spring. This is probably a convenience, but there is a loss in its strength, especially when it can be kept under cover by remaining in the yard.

3. *Gather up the Addments.*—There is a great deal of valuable matter in leaves and brakes, which if gathered in season, would be valuable as manure. Brakes, while they are green, might be mown and thrown into heaps, and then covered over with a little loam or mud, when they would rot very soon. Leaves can be gathered in the fall, and thrown into heaps in the same manner as brakes, or what is better, carried into a spare room into the barn or shed, and used as litter for the cattle.

Old woolen rags, horns, bones, hair, &c., can be thrown into a pile and covered over, which in process of time, will rot and make the most valuable manure. The sweepings of woolen factories, carding mills and tailors' shops, where they can be obtained, are not to be despised. In Chaptal's Chemistry, I find the following, which is worthy of notice:

"A very good manure is formed from wool. According to the ingenious experiments of Mr. Hatchett, hair, feathers and wool are only particular combinations of gelatine, with a substance an-

alogous to albumen; water can only dissolve them by means of fermentation, which takes place slowly and after a long time.

"One of the most surprising instances of fertile vegetation that I have ever seen, is that of a field in the neighborhood of Montpelier, belonging to a manufacturer of woolen blankets. The owner of this land causes it to be dressed every year with the sweepings of his works shops; and the harvests of corn and fodder which it produces are astonishing.

"It is well known that from the hairs of wool, transpire a fluid which hardens upon their surface, but which possesses the property of being easily soluble in water. This substance has received the name of animal sweat; the water in which wool has been washed, contains so much of it as to make it very valuable as manure.

"I saw, thirty years since, a wool merchant in Montpelier, who had placed his wash house for wool in the midst of a field, a great part of which he had transformed into his garden. In watering his vegetables he had used no other water than that of the washings; and the beauty of his productions was so great, as to render his garden a place of general resort. The Genoese collect with care in the South of France, all they can find of threads and rags of woolen fabrics, to place at the foot of their olive trees.

"According to the analysis of M. Vauquelin, this animal sweat is a soapy substance, consisting of a base of potash, with an excess of oily matter, and containing besides, some acetate of potash, a little of the carbonate and of the muriate of the same base, and a scented animal matter."

To what I have already said, I might add, have a heap of loam or sods under your sink-spout. The soap-suds and greasy dish-water which are so frequently running from the sink, should not be lost. The vessels from your chambers likewise should be emptied upon it, and also the blood, when you kill any of your creatures. If you do not wish to throw all together, have another pile a little removed from the house Some ashes or lime thrown on occasionally, would remove all unpleasant scent. JETHRO.

Farmer's Monthly Visitor.

HARVESTING GRAIN.

Millers have long been aware, and farmers have generally admitted that wheat or other grain cut a few days before it is perfectly ripened, will make more and better flour than if suffered to stand too long before harvesting. There seems to be enough of the developed juices in the stem and ear to perfect the filling of the kernel, while the envelope or bran does not become as thick, dark and hard, as when the cutting is too long delayed. Grain that is lodged or struck by the rust or mildew, should always be cut with the least possible delay, as in the first case the straw becomes

worthless while the kernel will not improve; and in the last instance, the longer it stands the more rapid and extensive will be the deterioration of both the straw and the grain. Cutting prevents the accumulation of more of the juices in the straw, where the already ruptured vessels and cuticle prove they are not wanted, and the appropriation of those that remain will be carried on by the kernel, until the stem is dried. Grain cut before it is fully ripe, threshes with more difficulty than that which stands until fully matured, but since the general introduction of machines, this objection has not the weight that formerly belonged to it. There are various ways of putting up the sheaves of wheat in the field to cure, before they go to the stack or barn. Some put six together, pressing their heads into as small a space as can be, and then capping them with the seventh; some put a dozen sheaves together by twos, and cover the tops with two sheaves placed butts together in the centre; but unless it is necessary the grain should stand a long time before carting, as good a way as any, perhaps, is to set up the sheaves by twos, merely leaning them gently against each other and without any capping at all. This system is practiced by our most extensive wheat growers, and while it requires less labor that any other mode of setting up, is found to occasion as little loss and give full as much security to the grain, as any that can be used. When, however, it is necessary that grain should stand several weeks in the field, it should as soon as dry, be put up in small stacks of six or eight shocks each, and well capped and secured against rain. *Cultivator.*

SHEEP IN THE SOUTH.

Important facts.—In Chester District, South-Carolina, there is a gentleman who has been breeding sheep for 30 years. He was lately written to for information on the subject by one of our subscribers—and he has replied at considerable length. This gentleman's experience sustains the opinion heretofore expressed by us, that this is the very country for sheep. An impression prevails quite generally among Mississippians, that sheep and wool will deteriorate in our climate; and this deters many from entering with spirit into sheep husbandry.

To correct this evil and erroneous impression, we mean to leave no effort untried. We therefore ask pardon for taking an extract from a *strictly private letter*, from the gentleman in South-Carolina, above mentioned. He is a man, as we have said already, of 30 years experience in sheep-breeding—of fine education—and of extensive observation, having travelled in much of the best portions of Europe. He is, withal, a practical as well as a scientific farmer, attending, in person, to the operations on his own farm. His word, then, is *authority* on this subject, and he says:

"The *quality of wool will not deteriorate in the South;* and with proper care, can be preserved *as pure* in the South as in the North.

I have some merino ewes and wethers, a cross of the Escurial and Guadaloupe breeds, *now giving* as fine wool as the original stock, after breeding them in and in, upon this farm, without any change for 30 years."

It is unnecessary to explain why no new cross or new rams were used, if it be remembered that Chester is about 200 miles from the seaboard, and that there is no fine stock in that region. As to the *quality of mutton*, every lover of that delicious meat knows well that the mutton of the South is unrivalled; yet on this point also, we shall draw upon the abovementioned letter.

"The opinion," says the writer, "as to the inferiority of merino mutton is mere prejudice. After the experience of 30 years I can say from my own taste, and the praise of it at my table, that it is equal to any mutton in the world—Welsh mutton not excepted."

The writer knew what he was speaking about—for he had bred South Down, Bakewell and Tunis.

We earnestly entreat our farmers to bear these facts in mind, and to pay more attention to sheep husbandry. If only a part bred buck, with a few ewes, were commenced with by every one that has the means, it would be an immense advantage not only to owners but to the country. [*So. Western Farmer.*

BROOM CORN, MILLET AND GUINEA CORN.

We have this year planted some of each of these crops on the same piece of ground, and are enabled to form some estimate of their comparative merits.

The broom corn ripens its seeds first, sending out its heads more than a month in advance of the Guinea corn, and nearly as much in advance of the millet. It also outstrips both the others in growth makes a larger stalk and attains a greater height. The stalk is juicy and sweet, and the fodder, though coarse, abundant and appearing to be relished by stock. The seed are not so large or abundant as those of the Guinea corn, but appear equally grateful as food The broom corn *tillers* or spreads less than the other two growths—but like them it will continue to shoot from the root after the first stalks are cut, and thus affords successive crops till frost.

The millet we tried is of the sort called millet corn, which shoots up as high as corn stalks, and sends out at top a long round ear with its small grains embedded in it—and not a little resembling the bull-rushes called cat tails. It ripens next to the broom corn and tillers more, but has less fodder and smaller stalks. The fodder and stalks however, are finer in texture and make better food than either the broom or the Guinea corn. The ears are eaten by all kinds of stock with greediness.

The Guinea corn is a growth nearly every one is acquainted with, though called by many different names. By some it is called Guinea corn—by others chicken corn—by others millet, and we perceive it is the Dura, of which our interesting traveller in Egypt speaks, as being so extensively cultivated on the banks of the Nile. It sends out heads like the broom corn, but with heavier and larger seed, of a brown color, and enclosed in black husks. The straws on which the seed grows, is shorter, finer and of more unequal length than those of the broom corn, and are therefore not to be compared with them in value for brooms. The Guinea corn tillers wonderfully and takes hold of the earth with an extremely strong deep set of roots. It shoots up repeatedly after being cut, and affords, like the other two growths, successive crops till frost. We believe it will yield more fodder and stalk than the broom corn certainly double as much as the millet, and also far more grain than either of these—but its later maturity detracts considerably from its value.

As far as we can judge without measurement and weighing, we are disposed to consider broom corn the most valuable crop of the three. It makes within a fraction as much fodder and grain as the Guinea corn—ripening more than a month in advance, and would of course yield a greater number of crops in the season. Some we planted on the 4th April had its seed fully ripe on the 1st July—less than 90 days—whereas some of the Guinea corn, planted on the 7th of March has not yet, in more than 4 months, sent out all its heads. The value of broom corn for brooms is well known—and by all who have tried it properly cured, its value as food is considered equally as great. Besides this, it does not leave so stubborn a root as the Guinea corn, and its stubble is less difficult to be broken up.

The millet corn (if the seed we planted was good,) has certainly been far overrated by its friends. It scarcely has a tythe of the productiveness of either of the other crops.

We have raised as full crops as we ever saw of the above growths —with only one working after the planting. They soon completely overshadow the ground and choke out all grass or weeds.

[*So. Western Farmer.*

GUANO MANURE AND POTATOES.

We have before alluded to this new manure, which is exciting so much interest in England, as one of the most efficient yet known. In C. W. Johnson's great work, the Farmer's Encyclopedia, now publishing in numbers, we find under the article Guano, some facts which, as exhibiting several matters comparatively, are of interest to the farmer, we give for the benefit of our readers. From a series of careful experiments, Mr. J. considers 35 bushels of Guano equal to 70 loads of good rotted manure, in its effect up-

on crops. Guano, it may not be amiss to add, is the dung of sea fowls, and found on some islands in the Pacific, on the shores of Peru. Considerable quantities have been imported to England, and as the quantity is apparently inexhaustible, the use of it promises to extend rapidly. It consists of the most active ingredients, bone earth, uric acid, and ammonia. The experiments of the table below were made by Gen. Beatson; and in every instance 35 bushels guano, 35 loads of horse dung litter, and 35 loads of hog dung litter per acre, were used. The potato was the root planted, and the table will show in what manner.

Large Potatoes planted whole.

Depth planted.	Guano. bush.	Horse. dung.	Hog. dung.	Simple. soil.
12 inches deep.	499	492	408	397
9 " "	466	460	427	327
6 " "	554	583	447	395
3 " "	531	479	414	311

Large Potatoes cut in pieces.

12 inches deep,	505	648	369	285
9 " "	557	589	434	382
6 " "	589	531	466	408
3 " "	557	511	375	414

Middle eye of Potato cut out.

12 inches deep,	382	479	298	163
9 " "	375	479	298	210
6 " "	576	563	405	337
3 " "	453	382	485	343

Small Potatoes planted whole.

12 inches deep,	492	401	592	369
9 " "	557	512	525	440
6 " "	628	583	544	570
3 " "	557	414	440	440

The comparative produce in lbs. of potatoes from these manures, was therefore as follows:

Guano,	639
Horse dung,	626
Hog dung,	534
Simple soil	446

The effect of different depths in planting, is as follows, in the total produce of bushels in each depth; a difference worthy the notice of the farmer, as showing that a depth of six inches is better than one greater or smaller.

12 inches deep,	7,181 bush.
9 " "	6,828 "
6 " "	8,177 "
3 " "	7,106 "

Another result is shown in this experiment, and that is the difference in the crop where large or small potatoes, whole ones or cut, are employed in planting. In General Beatson's experiment, the advantage is greatly in favor of small potatoes planted whole; and there are not many farmers in this country, who maintain the same position.

Large Potatoes planted whole, - - -	7,390 bush.
" " cut in pieces, - - - -	7,620 "
Middle eye of Potato cut out, - - -	6,230 "
Small Potatoes planted whole, - - -	8,464 "

[*Cultivator.*

DANIELL'S NEW ARTIFICIAL MANURE.

At length we have notice of the mode in which this new mixture is formed. The ingredients are as follows. Any wood mechanically reduced to powder—in plain words, saw dust; this is the basis, and it is to be thoroughly saturated, with bituminous matters, of all, or any kind; to this is to be added small proportions of soda and quick lime, and a very small quantity of sulphur. The principles on which this compound is formed, appear at first rather obscure; but one thing is apparent—it is an attempt to make an artificial bituminous coal, and to keep this in a state of slow combustion with only the substitution of soda for the potash of the wood, and the addition of quick lime. The proportions are not told, nor how long the compost is to remain before used, nor what the bituminous matters are; the only additional information is, that in using, it should be buried two or three inches under the soil, to prevent the evaporation of the volatile and valuable parts. Mr. Hall produced a sample of the manure—a coarse black powder, having a strong smell, somewhat resembling coal tar. Samples of the wheat grown by Mr. Daniell were also exhibited; and it was stated in reply to questions that the crops produced were greater in quantity, better in quality and weight, and produced with one third the ordinary quantity of seed. If this new manure will give us artificial coal, which will, *of itself*, enter into slow combustion, and furnish vegetables with its ammoniacal product, by degrees, as required, it must be of immense importance to agriculture.

The value of bituminous soot as a manure, has never been doubted; but, like many other manures, it has too often been applied in such large quantities or in such strong solutions, as have rendered it injurious instead of beneficial. Bituminous coal contains from 13 to 16 per cent. of nitrogen or azote, and from 4 to 12 per cent. of hydrogen. When coal is burnt, these two gasses unite and form ammonia; when burnt in the open air the ammonia goes partly into the atmosphere, and is partly condensed in the soot; but when burnt in retorts, for the purpose of affording gass for illumination, the ammonia is dissolved in the liquor used for purifying

the gas, and is called the ammoniacal liquor for gas works. The manure will probably be about one third the price of bone dust.

The following account of it was given to the Royal Agricultural Society, and is extracted from the Boston Courier.

"It had long been a subject of inquiry, what is the food of plants, how are they supplied, and what are the elements of their growth? There was every reason to believe that a reply could now be given of a more satisfactory nature than had ever been hitherto known; besides which, by the discovery of Mr. Daniell, a most important corroboration had been obtained of what had been considered the elements of vegetable growth; those elements were carbon or charcoal, hydrogen or inflammable gas, oxygen or vital air, and nitrogen. All these elements existed in the atmosphere, in combination with other elements, in which state they were found to be the sources of vegetable development. It was known to persons accustomed to rural pursuits, that the heaps of vegetable substances collected for the purposes of manure, during the process of decomposition, became greatly reduced in bulk and weight. If they investigated the causes of this reduction, they would find that it was occasioned by the evaporation of the carbonic acid and ammonia, the principal sources of nutriment to plants. The discovery of Mr. Daniell, contained all the elements of vegetable growth. It did not supply new elements, but the same derived from other sources. It was known, that by combustion substances were rapidly decomposed, and its operation produced the elements of vegetable growth. There were on the earth numerous plants which were apparently useless, but it was a principle in nature that nothing should be lost, and they were capable of a reduction into their elements, and being made the means of vegetable growth in other forms. The discovery of Mr. Daniell was suggested by the fact that, while burning vegetable substance, he observed that the ashes became blackened by the surrounding smoke, and when used in that state were very fertilizing. This led him to investigate the cause, and as the result of the investigation he had produced the new manure, the elements of which were carbon and ammonia. With it the principal properties would not fly off during decomposition, as that would take place in the earth. Among other advantages, it was light in weight, cheap, and capable of being produced in any quantity.

"This manure has been applied by the discoverer to his own crops, on three acres of poor land, in an elevated situation, on some of which he has grown wheat four successive years, with improving results each year; its good effects are therefore founded upon experience, personal observation, and the testimony of other observers competent to judge. From the nature of the manure, it is applicable, with some variations in its composition, to every kind of crop. It is not a stimulating manure, in the ordinary sense of the word—that is, it will not have a tendency to call into activity

the existing resources in the soil—but its direct effect is to convey to the soil the direct nutriment of future growth. This effect is produced by the supply of ammonia to the soil in substance calculated to retain it for a time—to again absorb it from the atmosphere—as they give it out to plants during their growth. It will probably prevent also the ravages of insects.

"Its mode of application may be various, according to the circumstances of the crops The application by drill is conducive to economy of the manure, and a direct application to the infant plant, as is the case with bone-dust. Care however must be taken that it is not applied too directly to the plant, or without some portion of mould around it. This is the only precaution needed to avoid danger in its use. There is one required to prevent waste, as it is of a volatile character; that is, to place it several inches in the earth as the earth will absorb and retain the volatile and valuable part. For grass lands, for similar reasons, it will be well to have it mixed with a considerable portion of ordinary unvalued mould. If the manure, as manufactured, be mixed with an equal bulk of mould, it will be perfectly safe for application; or if the mould of the field be stirred over it, when drilled, it will suffice. The quantity to be used will vary according to the crop like any other manure. About twenty four bushels per acre are recommended for wheat, and half as much more, or thirty-six bushels, might be beneficially applied for turnips or mangel wurtzel. The most beneficial quantities will easily be ascertained by the intelligent farmer." *New Genesee Farmer.*

OUR OWN EXPERIMENTS WITH MANURES.

The following account was prepared for another purpose besides insertion in the Farmer; therefore in preparing it we dropped the editorial *We*, and used the farmer's *I*.—[Ed. New Eng. Farmer.

TO THE COMMITTEE OF THE ESSEX COUNTY AGRICULTURAL SOCIETY ON MANURES.

Gentlemen—During the last winter, I formed a purpose to try carefully to ascertain the comparative value of various manures, as producers of several of the crops of most common and general cultivation. After giving the subject much thought, I resolved upon making the trial under such circumstances as might promise best, in my judgment, to show simply the *relative effects of the manures*. Setting aside all solicitude as to the *amount of the crop*, I selected for my operations a piece of sward land, very much bound out, and which probably had received no manure of any kind for ten years or more. I hoped to find the soil uniform in depth and quality, when it should be turned up with the plough; but in this I was somewhat disappointed; for it varied considerably both in depth

and apparent fertility; not more, however, than is common in most fields that are nearly, *but not quite* level.

Not being solicitous about the amount of the crop, I ploughed this ground when it was quite wet—too wet for profitable working. The following paragraphs are copied from my journal:

1842—April 13. Ploughed up a little more than 3-16 of an acre of sward land, on which to make experiments with manures. The land was badly bound out: I think it did not give more than 1200 lbs., of hay per acre 1841. I ploughed from 7 to 8 inches deep, and subsoiled with a cultivator tooth fitted into an oak joist.

14. Harrowed this ground, though it was too wet for allowing the operation to be of much utility. Then I marked off the ground into 30 square beds, each 17 by 17. Used the plough in marking.

15. Put near the centre of each bed its own manure, leaving the manure in a small, well rounded heap, and slightly covered with some of the soil of the bed.

In preparing the composts, the calculation has been to make that for each bed cost at the rate of about $30 per acre, including the ordinary cost of working over and putting on to the land. Muck or swamp mud, is estimated here at $1 50 per cord, of 128 solid feet, when first taken from its natural bed, or at $3 when it has been frozen and partly dried. My barn cellar compost is reckoned at $6, and *pure dung*, whether from the oxen or the horse, at $12 per cord. The other articles generally are taken at about the usual market price, adding cartage for five or six miles, and the expense of applying them to the soil. Some of the articles have no market value.—Thus far the journal.

The beds were numbered from 1 to 30, and generally each received 3 bushels of meadow mud, reckoned at 3 cents per bushel, and 9 cents worth of some other article. The medow mud or muck here used, was taken from beneath a growth of alders, where the mud was from 12 to 20 inches deep. It was dug in December, and had been well frozen, but not much dried when it was measured out. This medow or swamp mud, is designated by the term muck in the following table.

Bed.

No. 1, received 3 bushels muck and 6 lbs. oil meal.
" 2, " 3 " muck and one bushel shoemakers' waste leather chips—old—taken up at the road-side.
" 3, " 3 " muck and 1 bushel new leather shavings from the shop.
" 4, " 3 " muck and 6 lbs. of fish—(tainted hallibut.)
" 5, " 3 " muck and 6 quarts crushed bone.
" 6, " 3 " muck and 5 quarts salt, (fisherman's refuse.)
" 7, " 3 " muck and 1½ lbs. nitrate of soda.
" 8, " 3 " muck and 5 quarts ground plaster—damp and lumpy.

Bed.

No. 9, received 3 bushels muck and 12 quarts sugar sediment or bone black, from the sugar refinery, East Boston.

" 10, " 3 " muck and 18 quarts of ashes—(mixture of wood and peat.)

" 11, " 3 " muck and 5 quarts salt and lime, n equal parts—mixed in November last.

" 12, " 3 " muck and 1 lb. carbonate of ammonia—not fresh.

" 13, " 3 " barn cellar compost.

" 14, " 1½ " pure ox dung.

" 15, " 1½ " pure horse dung.

" 16, left without any manure.

" 17, " 3 " muck and 16 lbs. soapboiler's scraps (meat.)

" 18, " 3 " muck and 2 lbs. whale oil soap.

" 19, " 3 " muck and 3 pecks of pure horse dung.

" 20, " 3 " muck and 3 pecks of pure ox dung

" 21, " 3 " muck and 2 quarts air slacked lime and ½ bushel ox dung.

" 22, " 3 " muck and 7 quarts ashes (poor) and ½ bushel ox dung.

" 23, " 3 " muck and 6 quarts air slacked lime.

" 24, " 3 " muck alone.

" 25, " 3 " muck and 8 gallons salt ley, or soaper's waste.

" 26, " 3 " muck and 8 gallons ox urine.

" 27, " 3 " muck and 8 gallons human urine.

" 28, " 3 " muck and 3 bushels of gravel.

" 29, " 3 " muck and 2 pounds woolen rags.

" 30, " 6 " muck.

Remarks.—No. 12; 1 lb. of ammonia. Had the article been fresh and good, I should have taken only ½ a pound, for 9 cents will only purchase only about that quantity. That used by me had been done up in a paper and left in a closet for months; when taken out and pounded, it had lost nearly all its peculiar smell. Thinking its virtues much impaired, I doubled the quantity. Perhaps in doing so, I gave this article an undue anvantage.

No. 13. Am not sure, but apprehend this was better than the average of my barn-cellar compost.

Nos. 14 and 15. The oxen were on high feed and the horse on low. The ox dung may have been better than common, and the horse dung not as good.

No. 28. The gravel was fine and redish in color; probably impregnated with the sulphate of iron, and worse than useless.

No. 29. The rags seem not to have decomposed yet.

Nos. 6 and 11. The salt was apparently too powerful; a less quantity probably would have been better.

Nos. 35, 26 and 27. For each of these, 3 bushels of muck was put into a cask and the liquid was poured in about the 1st of May. After remaining in that state for 10 or 12 days, the contents of each cask was emptied out on its appropriated bed. At the same time, all the heaps were carefully forked over.

May 26. Harrowed the whole ground as well as I could without disturbing the heaps of compost. Then opened a slight trench around each bed, to mark its boundaries distinctly. Then spread with care each heap upon its own bed. Then back-furrowed into ridges, making five equal ridges on each bed. The whole piece of ground was in the form as given in the following diagram:

30	24	18	12	6
29	23	17	11	5
28	22	16	10	4
27	21	15	9	3
26	20	14	8	2
25	19	13	7	1

I passed through making rows or drills from No. 1 to No. 6, but was careful not to carry manure from one bed to the next, with the plough. The same day, one of the five rows on each bed was planted with Indian corn, the kernels being placed in a line six inches apart. One row of each bed was planted to Long Red or La Plata potatoes. Five fair and middling sized potatoes were put in the row on each bed—seed *whole*. One row on each bed was sowed to the long orange carrot, and one to sugar beet:—This May 27. The remaining row on each bed was sowed to ruta bagas, June 24.

The beds were laid out 17 feet square, but as the small trench or path between the beds was taken out of the 17 feet, I call each bed a square rod, and each row on a bed one eight hundredth part of an acre.

The seed all came up well excepting the sugar beet. Every kernel of corn and every potato came—though some of them on the salt, and more of them on the salt ley, were very tardy about it—especially the potatoes. The beet seed was not good: where no manure was applied, none of it germinated: but on the salt ley much of it came. Several of the manures seemed to call forth, or into action, its vitality.

These several crops were ploughed, hoed, wedded and thinned about as well as my crops usually are, great care being taken to treat all the rows alike. Excepting in the case of the beets, where the plants failed to come up with any thing like evenness or regularity, the principal cause of difference in crop is to be found in the manure. In the table of results I shall make no account of the beets. Some allowance ought to be made for the difference in soil. After much thought upon this point where *opinion is to decide*, I can do no better than form another diagram, and number the squares according to the estimated quality of the soil. And I shall suppose that No. 1 is better by 1-20th than No. 2, and that No. 2 is better by 1-20th than No. 3, and so on.

8	7	6	7	8
7	6	5	6	7
6	5	4	5	6
5	4	3	4	5
4	3	2	3	4
3	2	1	2	3

But without noticing this qualification farther, at present, I shall now give a table showing the actual products, as obtained by weight, at the time of harvesting, which was in the latter part of October. The figures express the number of lbs. obtained in each bed. To get the rate of yield per acre, multiply any one of these figures by 800.

Kind of Manure.	Corn.	Potatoes.	Carrots.	Ruta bagas.
1. Muck and oil meal, - -	3¾ lb.	14	19¾	15
2. " and leather (old)	2½	9	12	6½
3. " and " (new)	1	10	8½	7
4. " and fish,	½	10	7	10
5. " and bone,	2½	9	11	12
6. " and salt,	½	5½	4½	9
7. " and nitrate of soda,	2½	12½	17	21
8. " and plaster,	1	8	11	11½
9. " and sugar sediment,	1	13½	10	17
10. " and ashes,	3	22¾	7½	32
11. " and salt and lime,	¼	9½	2	6
12. " and carb. ammonia,	½	11	1¼	8
13. cellar compost,	5	21	21¾	25½
14. ox dung,	1¾	17½	18¼	12½
15. horse dung,	2½	15½	14	11
16. no manure,	⅛	8¼	1	0
17. " and meat,	¼	9¼	¼	3½
18. " and oil soap,	2½	16	9½	3½
19. " and horse dung,	3¼	12½	13½	14½
20. " and ox dung,	2	12½	8¼	12
21. " and lime and ox dung,	3	12½	11½	12
22. " and ashes and dung,	4½	15¼	17½	15
23. " and lime,	½	9	13	6
24. muck alone, (3 bush.)	2½	11	13	17
25. " and salt ley,	½	15¼	½	32
26. " and ox urine,	1-10	14½	1½	16
27. " and human urine,	1½	9½	4¼	19
28. " and gravel,	½	8	4	6
29. " and woolen rags,	½	9½	3	14½
30. muck alone (6 bush)	1	11	8½	16½

If we look back for those which have yielded most, we shall get the following results:

For Corn.

Best,	Cellar compost.
2d best,	Ashes and ox dung.
3d do.	Muck and oil meal.
4th do.	Muck and horse dung.
5th do.	Ashes and muck.

For Potatoes.

Best,	Ashes and muck.
2d best,	Cellar compost.
3d do.	Ox dung.
4th do.	Oil soap.
5th do.	Horse dung.

The seed all came up well excepting the sugar beet. Every kernel of corn and every potato came—though some of them on the salt, and more of them on the salt ley, were very tardy about it—especially the potatoes. The beet seed was not good: where no manure was applied, none of it germinated: but on the salt ley much of it came. Several of the manures seemed to call forth, or into action, its vitality.

These several crops were ploughed, hoed, wedded and thinned about as well as my crops usually are, great care being taken to treat all the rows alike. Excepting in the case of the beets, where the plants failed to come up with any thing like evenness or regularity, the principal cause of difference in crop is to be found in the manure. In the table of results I shall make no account of the beets. Some allowance ought to be made for the difference in soil. After much thought upon this point where *opinion is to decide*, I can do no better than form another diagram, and number the squares according to the estimated quality of the soil. And I shall suppose that No. 1 is better by 1-20th than No. 2, and that No. 2 is better by 1-20th than No. 3, and so on.

8	7	6	7	8
7	6	5	6	7
6	5	4	5	6
5	4	3	4	5
4	3	2	3	4
3	2	1	2	3

But without noticing this qualification farther, at present, I shall now give a table showing the actual products, as obtained by weight, at the time of harvesting, which was in the latter part of October. The figures express the number of lbs. obtained in each bed. To get the rate of yield per acre, multiply any one of these figures by 800.

Kind of Manure.	Corn.	Potatoes.	Carrots.	Ruta bagas.
1. Muck and oil meal, - -	3¾ lb.	14	19¾	15
2. " and leather (old)	2½	9	12	6½
3. " and " (new)	1	10	8½	7
4. " and fish,	½	10	7	10
5. " and bone,	2½	9	11	12
6. " and salt,	½	5½	4½	9
7. " and nitrate of soda,	2½	12½	17	21
8. " and plaster,	1	8	11	11½
9. " and sugar sediment,	1	13½	10	17
10. " and ashes,	3	22¾	7½	32
11. " and salt and lime,	¼	9½	2	6
12. " and carb. ammonia,	½	11	1¼	8
13. cellar compost,	5	21	21¾	25½
14. ox dung,	1¾	17½	18¼	12½
15. horse dung,	2½	15½	14	11
16. no manure,	⅛	8¼	1	0
17. " and meat,	¼	9¼	¼	3½
18. " and oil soap,	2½	16	9½	3½
19. " and horse dung,	3¼	12½	13½	14½
20. " and ox dung,	2	12½	8¼	12
21. " and lime and ox dung,	3	12¼	11½	12
22. " and ashes and dung,	4½	15¼	17½	15
23. " and lime,	½	9	13	6
24. muck alone, (3 bush.)	2½	11	13	17
25. " and salt ley,	½	15¼	½	32
26. " and ox urine,	1-10	14½	1½	16
27. " and human urine,	1½	9½	4¼	19
28. " and gravel,	½	8	4	6
29. " and woolen rags,	½	9½	3	14½
30. muck alone (6 bush)	1	11	8½	16½

If we look back for those which have yielded most, we shall get the following results :

For Corn.

Best,	Cellar compost.
2d best,	Ashes and ox dung.
3d do.	Muck and oil meal.
4th do.	Muck and horse dung.
5th do.	Ashes and muck.

For Potatoes.

Best,	Ashes and muck.
2d best,	Cellar compost.
3d do.	Ox dung.
4th do.	Oil soap.
5th do.	Horse dung.

For Carrots.

Best,	Cellar compost.
2d best,	Muck and oil meal.
3d do.	Ox dung.
4th do.	Ashes and ox dung.
5th do.	Nitrate of soda.

For Ruta Baga.

Best,	Muck and selt ley.
2d best,	Ashes and muck.
3d do.	Cellar compost.
4th do.	Nitrate of soda.
5th do.	Human urine.

From this arrangement it would appear, that the compost from the barn cellar did best; that was composed of both the dung and urine of cattle, horse, hogs and human beings mixed with straw and muck. It may have been better than the average from the cellar, and probably was, though there was no design to have it so. The soil too, of bed 13, on which this was put, is classed No. 1.

Next to this comes ashes and muck on No. 10, where the soil is classed No. 5. It seems to me unnecessary to draw out the results more fully. I will merely string along names nearly in the order of value according to my experiment.

1. Cellar compost. 2. Muck and ashes. 3. Muck and nitrate of soda. 4. Muck and oil meal. 5 Muck, ashes and ox dung. 6. Pure ox dung. 7. Muck and horse dung. 8. Horse dung. 9. Oil soap. 10 Three bushels of muck alone. 11. Six bushels of muck. 12. Muck, lime and ox dung. 13. Muck and ox dung. 14. Muck and bone. 15. Muck and oil soap. 16. Muck and plaster. 17. Muck and old leather. 18. Muck and lime. 19. Muck and fish. 20. Muck and woolen rags. 21. Muck and new leather. 22. Muck and salt ley. 23. Muck and human urine. 24. Muck and ox urine. 25. Muck and carbonate of ammonia. 26. Muck and salt. 27. Muck and gravel. 28. Muck, salt and lime. 29. Muck and meat. 30. *Nothing*. Although my corn, carrots and ruta baga came up well on bed 16, which had no manure, they all perished or very nearly so. This soil was of middling quality on the lot. And the facts in regard to this bed tell how far I succeeded in management so as to learn precisely *what the manure would do.*

Many calculations might be made and many inferences drawn from the above facts, which my engagements at present do not permit me to go into, and which few would have patience to read. The elements are all given, and the curious who are so disposed, may determine what my crop of each kind was per acre on each bed—what addtions and substractions for variations in soil, &c.

My liquid manures were probably too strong in the early part of the season—for while the other crops almost perished there,

beets excepted, the ruta bagas, which were sowed late in June, did well: the salt ley seems very favorable to the ruta baga. Three bushels of medow mud gave a better crop than 6 bushels—and this quantity (3 bushels) did better alone than with nearly two thirds of the articles mixed with it.

This experiment shows the worth of the several articles used as manure, *for one year only*. It is desirable that their effects upon future crops should be observed: this must be done before the full value of the experiment can be received.

The crops upon this ground were small, as I knew they must be. The cost of the manures was about $5 50. The labor about as much more—while the crop was not worth more than $5.

I have attended personally to every thing that has been done to the lot, and have performed the greater part of the labor with my own hands. No pains have been spared to make the trial as accurate as possible. *N. E. Farmer & Horticultural Register.*

LIQUID MANURES.

In the preceding volume of this work, page 134, there is very interesting article on the propriety of using liquid manures for purposes of horticulture; a solution of soot and water is therein recommended, in the proportion of six quarts of the former to a hogshead of the latter. This mixture has been found to exercise a most salutary influence on peas, asparagus and a variety of other vegetables to which it has been applied. We do not doubt the fact stated, and would here observe that the soap suds which is made in a farmer's family, which is mostly thrown away, is one of the most effective manures that can be applied to vegetables and flowers of all kinds. From an experience of several years, we can testify to its invigorating effects, and recommend its use with confidence. There are but few families, anywise extensive, who do not make a sufficient quantity of this article, in the course of the year, to keep a garden of tolerable size, not only in good condition, but rich enough to secure good crops of vegetables.

[*Baltimore Farmer and Gardner.*

PENNYROYAL.

Farmers might confer great kindness on their animals, in preventing the grievous annoyance of flies, by simply washing the parts with the extract of pennyroyal. Flies will not alight a moment on the spot to which this has been applied. Indigo weed fastened about the harness will likewise keep off flies.

[*Cultivator.*

HORTICULTURE.

THE GARDEN SNAIL.

There are two very different species of Snail in the gardens in Charleston. They are both of foreign origin, and are both considered very troublesome.

The large round snail has long been known in the gardens; it is the "*Helix aspersa*," a very common and extensively diffused species in Europe. It is said to have been imported by some of our French ancestors, as an article of food in certain cases of disease. It is much more probable that we are indebted for its introduction to the ballast from European vessels.*

The other species of Snail is much the most formidable enemy in our gardens, and is also a foreigner—it is the "*Bulimus decollatus*," from the South of France, and described in this country by Mr. Say, as the "*Bulimus mutilatus*," from specimens sent to him by Mr. Stephen Elliott.

It is of much more recent importation than the "*Helix aspersa*," and is thought to destroy that Snail.—In gardens in which the round Snail was once very abundant, not an individual can now be found—but the long Snail has become extremely numerous It is difficult to date the introduction of such animals, but about the year 1813, this Bulimus made its appearance in some of the gardens in the lower part of Meeting-street, and has since been gradually spreading over the whole city.

It is gathered by gardeners, and frequently thrown alive into the river; the shells are therefore occasionally found on the neighboring shores, particularly on the beach at Sullivan's Island.—Individuals not unfrequently reach the shore alive, and with strength enough to seek the herbage for food and shelter—and thus they may be propagated in various directions around the city.

Within the last two years, they have been observed in a garden on Sullivan's Island, and will probably extend their depredations there, as they have done in the city.

It is not known, if they have as yet been found beyond the city, except in the garden at Sullivan's Island. E.

Charleston, S. C. 1842.

THE WHITE OR BELGIAN CARROT.

We noticed last season the success of our fellow-townsman, Mr. Geo. Law, in raising a crop of this variety of the Carrot. Upon that occasion we spoke favorably of it as a vegetable for the table,

* This supposition has been ascertained to be a fact, as the garden of a gentleman in Charleston was never troubled with any slugs, until the season after he spread small ballast in the walks, which came from Europe.

and as food for stock, and our attention has been again drawn to the subject of their superiority, by a report of a crop upon the farm of Lord Ducie at Whitefield, Ireland, which we find in the *Irish Farmer's & Gardner's Magazine*, published in Dublin. The extent of the piece of ground in culture was 1 acre 36 perches, from which 64 cart-loads of roots were taken. The average weight of a cart-load was found to be 10 cwt. This gives 32 tons as the total weight of the crop, which is at the rate of 26 tons 3 cwt. or 975 1-6 bushels per acre. The soil on which they were grown, is a sandy loam, and the writer observes that they were the heaviest crop on the farm. The seed was sown in the second week in April, on land which had been ploughed 10 inches deep, on the flat, in rows 18 inches apart. The seed had been previously mingled with damp sand for several days, in order to partially sprout it and render it easier of being drilled. The plants were thinned out at a fortnight old, 6 inches asunder in the row, and received only one hand and two horse hoeings, which completed their culture. The expense of their culture is estimated at only half that of any other root crop grown on the estate of Lord Ducie. The ground had been, the previous year, in Swedish turnips, when it received a dressing of manure, the carrots however, were not manured.

The conductor of the Magazine whence we have made this abstract, states that the white carrots generally exceed the red ones in weight, from 8 to 9 tons per acre. Of the white carrot there are two varieties, the best is that which makes a larger portion of its root above ground.

In speaking of the acreable product of the white carrot, Col. *Le Couteur* informed the Editor that he had grown 38 tons to the acre, which is equal to 1418 2-3 bushels.

From what we have seen of this root, the above products do not surprise us; on the contrary they are what we expected from a root of the kind, and should be gratified to see it introduced into general culture, not only for the purposes of the table, but as a provender for milch cows; for of a truth, we are solicitous to see these animals better cared for than they generally are.

RAISING AND PRESERVING IRISH POTATOES.

Mr. Baily,—*Dear Sir:* I see in the May and June number of your valuable paper, a call for information upon the best mode of raising and preserving that delicious vegetable, the Irish potato. I can't say I am possessed of the best knowledge on this subject, but I am willing to state through your paper to those who feel an interest, my mode of raising them, which I can recommend.

First:—The land should be moderately level and rich, or made so by manuring. It should be deeply ploughed in, the first of January, and suffered to remain so until the proper time for planting,

which is from the first to the middle of February. The land should then be ploughed again as deeply as possible, and laid off at about four feet distances and to a great depth.

Secondly:—Great attention should be paid to the choice of seed; I have tried some five or six different kinds, and above all I give my preference to the Pink-Eye, as the best, and to the Mechanics, as the most prolific.

Thirdly:—My mode of preparing the seed is, to cut them up in small pieces, say one good eye to the piece. They should be cut twenty four or forty-eight hours previous to planting and rolled in dry ashes, as it has a tendency to draw the water from them and preserves them from rotting. Each piece should be carefully laid down, eight or ten inches apart, with the eye up, as they are liable to rot if the eye is put down.

Fourthly:—You may, in going on to cultivate them, now place your half rotted straw, corn stalks or pea vines over them, and cover the whole lightly with earth, either with the hoe or plough. After coming up and getting five or six inches high, they should be hilled lightly, with the hoe. In two or three weeks after, you may plough them, throwing the dirt to them. If they become foul after this, pass the Cultivators in the middles. And this is all the work necessary in *raising* a crop of Irish potatoes.

But lastly:—In preserving the potato, we find a little more remains to be done; for we all know that nothing is well done without its degree of labor. To this end then, you must have a house; but it may be a cheap one, as to all that is required in this climate, is to keepthe potato from the sun and rain.—They should be dug in dry weather, and carried into the house as fast as dug, not permitting the sun to shine on them longer than can be helped. They should be spread thinly over the floor, which should be moderately open. In this manner Mr. Editor, I have succeeded in preserving the potato for several months in a sound state; but should some of them rot, I have them picked out, as they affect the rest. Last year, from one barrel of seed, I raised from ninety to one hundred bushels.

Your obt. servt,

O. KIBBE.

[*Southern Planter.*

TO FORWARD VEGETABLES.

If you wish to produce early vegetables, before the usual time.—as, for instance, cucumbers, melons, &c, take a few large potatoes or common sized turnips, and scoop out the inside with a knife or spoon, and fill the cavity with rich earth. In this deposit a few seeds, and place the potatoes in some warm situation in the house. They will soon sprout and grow. By the time the season is advanced beyond tbe danger of frost, the potatoes, previous care being taken to dig out the eyes, may be set out in the open ground.

The plants will continue to grow without disturbance, and the potatoes will soon rot and afford nutriment for the plants. We have tried this method often with success. The only danger is, that if the plants stand long in the house after they are up, and are placed in a situation where it is considerably darker than it is out of doors. the stems will run up too tall and cause danger to them from the winds after they are transplanted. To avoid this, it is well to place them on the window-stool where it is very light, and turn them occasionally to prevent their acquiring the habit of looking too wishfully out of doors. When set out, the earth may be drawn about the stem quite high up without injury.

Hand glasses are an excellent thing in the garden to forward and protect early vegetables. A shallow box, higher on the backside than on the front, that is large enough to be covered by two panes of glass, will answer a very good purpose A joiner will make you a dozen for a dollar or two. These should be placed over the hill facing the south—so that the sun may have the best command of them. Seeds planted in these will soon come up. and the covering will protect them from frost. In warm days the glass should be removed to give the plants the benefit of air. They should, too, be watered seasonably. There is another advantage in these hand glasses—especially for cucumbers, melons and squashes. They will be so forward and attain such a size, that by the time you are safe in taking up the boxes, the plants will be out of the way of the yellow bugs and other insects. In this way you will ensure a crop. They are also important to ensure a ripened crop, of late sorts of melons and winter squashes. By means of the boxes, nearly a month may be gained in the length of the season, which will put them out of the way of the frost of autumn.

THE ORCHARD.

TRANSPLANTING.

The fall is decidedly the best season for transplanting all kinds of hardy trees, though this is contrary to the general opinion throughout the country. Many say they have never succeeded so well in the fall as in the spring. The reason of this is, that their fall planting has not been performed in due season. If trees are carefully planted, and secured from being blown about by the winds, any time in the latter half of the month of October, or the first week in November, they will gain nearly a year's growth over those planted the following spring. Besides, the spring is always a busy season with the farmer, and the planting of trees, shrubs, &c., if deferred till then, is too frequently forgotten entirely.

Persons who intend planting orchards, or making improvements around their dwellings, by planting ornamental forest trees and

shrubs, &c., should avail themselves of the very earliest period of the present month suitable for doing so. It is also the only proper time for transporting trees, &c., to the interior of the country. Trees can be carried safely by canal to the most distant west if shipped early; in spring it is quite impracticable, as vegetation is invariably too far advanced before canal navigation commences.

Many persons possessing a heavy clay soil, have become quite discouraged from their trees dying year after year: several have told me that it is of no use for them to plant more, as they will not live. The difficulty is, they have taken no more care in planting than is requisite in the finest sandy loam.

In stiff adhesive soils, the subsoil should be dug out at least one foot deeper and two feet farther in circumference than the roots of the tree require, and good friable surface soil filled in; and the surface should be kept as well hoed as a flower border, during the first year at least after planting. Let those who have a heavy clay soil pursue this practice and they will be successful. P. B.

New Genesee Farmer.

MISCELLANEOUS.

ELECTRO MAGNETIC POWER.

This is a subject now attracting much attention in Europe—the Journals of the day announce exhibitions of its application to various kinds of machinery, such as Printing Machines, Turning Lathes, Saw Mills, and Locomotive carriages.

One of these exhibitions, (in Edinburgh) by Mr. Robert Davidson, of Aberdeen, is very interesting.—and the results of his experiments upon Electro Magnetism, as a motive power, promise improvements of great practical value—they indicate the perfect applicability of Electro Magnetic Power to engines of every description.

In the *Literary Gazette*, it is stated, that a distance of 57 miles has been travelled over a common road, in a Bath chair, in one hour and a half, and further, that the appliee comes over daily from St. Albans to the Bank of England, in said chair, in half an hour, at an expense of sixpense.

The most interesting notice of an Electro Magnetic Locomotive, is the following, translated from the "Echo du Monde," for the *National Intelligencer*.

"A letter has been received from Leipsig, dated 23d July, stating that Mr. Lewis Gabriel Stochrer, a Mechanician of that city, has just finished an Electro Magnetic Locomotive, the greatest part of which is constructed after Mr. Wagner's plan, and which has been purchased by the Germanic Diet.

This Locomotive is of seven horse power, and will draw three cars full of passengers—it costs about $1,000, instead of 7,500—the cost of a common steam locomotive: the supply for it amounts to not more than 60 cents per day."

"The experiments which have been made with Mr. Stochrer's Locomotive on the Rail-Road between Leipsig and Dresden, left nothing to be desired."

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BUTTER MAKING.

Mr. Were, of London, who has been for more than thirty years engaged in the butter trade of that city, has furnished a paper to the New Farmer's Journal, on the best manner of preparing and keeping butter, from which we extract the following:—

"Solidity and firmness, is, I think, of more consequence than is generally allowed; the nearer butter can be made of the consistency of wax, the longer will it retain its flavor. To accomplish this object, I recommend salting the cream, by putting in rather more fine table salt, than is used when applied after churning, because a part is left with the buttermilk; or instead of salt use clear brine, to mix with the cream or butter. Brine is preferable to salt, as the butter is smoother and better flavored. If salt be used, it may be in the proportion of half an ounce of fine dry table salt, mixed with two drachms of salt-petre, and two drachms of sugar, both made fine, to every pound of butter. If the butter be made in lumps for market, I should recommend that each lump be wrapped round with a piece of calico, soaked in brine made from fine dry salt, that will carry an egg; for if the brine be weak, it will be injurious. If the butter is put into a firkin, the cask should be made of white oak, ash, sycamore or beach, well seasoned by scalding out several times with *hot* brine, made from pure and clean salt. If very choice butter, I would recommend a salt cloth around the butter, also on the top and bottom; the cloth to be kept in its place by a hoop, which can be removed as the cask fills." Mr. Were deprecates the use of the hand in making butter, and recommends the use of wooden pats, not unlike our farmer's wives butter ladles, for beating out the buttermilk or packing in casks. "These pats must be always (except when in the hand for use) kept in a tub of cold fresh water, which will prevent the adhering of the butter, and keep them cool."

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BUTTER.

Messrs. Editors.—In the April Number of the Farmer, I observed some extracts from the Cultivator, as to the method of making good Butter. Some of the directions contained in that article, I think are incorrect.

In the first place, the practice of bringing the cream or milk to a proper temperature by means of warm water, I think is very injuri-

ous. Warm water coming suddenly in contact with the cream, causes certain portions of it to curdle and become blended with the butter, and can never again be separated; the butter will appear spotted and have a sour taste, and will very soon become rancid. When the churning requires warming, the better way is to fill a tin pail or pan with cream or milk, set it in hot water stirring it while warming. This can be repeated until the whole is brought to a proper temperature. It is much more safe to churn too cold than too hot. Butter when taken from the churn, will contain a considerable portion of other matter, and on the proper separation of them, the quality of the butter in a great measure depends. If the business has been rightly conducted, these may be almost entirely removed by working with the ladle, turning it over, pouring off the milk from time to time as it collects. Continue working until the milk ceases coming off, add the proper quantity of fine salt, mixing it well with the butter, and set it in a cool place until the following day, when it must be again thoroughly worked. Here a caution may be necessary, viz. Having obtained good butter, don't spoil it with salt as is often done. A medium is the best —not so little as to make it insipid, nor so much as to destroy the flavor and make the taste disagreeable.

Again, I think the method of exposing the butter a week or so, to the air before it is packed, is highly injurious. In packing butter, the firkin should be seasoned for at least a week previous to using it, by filling it frequently with buttermilk, and afterwards properly cleansed and scalded The butter should be put down as soon as the second working is finished, while it is yet soft and pliable, pressing it together in such a manner as to leave no vacancies between the churnings. If the butter is intended to be kept for any length of time, the following treatment will answer the double purpose of excluding the air and supplying the proper pickle which are both necessary. Cover the butter neatly with a linen cloth, over which lay a quantity of fine salt; add from half a pint to a pint of pure water; repeat either or both when necessary; set it in a cool dry cellar.

By observing the above directions, you may have a good article to offer for sale, and save Oneida county from the reputation of sending so large a quantity of poor butter to the New-York market.

Rome, April 30th, 1842. D.

[*N. Y. Farmer*

HOW TO PRESERVE SWEET POTATOES.

To the Editors of the Tennessee State Agriculturist:

GENTLEMEN:—I have for some time thought I would give to the world, through your useful paper, the knowledge of preserving Sweet Potatoes, which I consider a very delightful and healthy vegetable, and I have seen but few persons who were not fond of them. But how to preserve them through the winter, few persons

have yet learned. Yes, sirs, I have known old men in North-Carolina and even in Tennessee, who knew nothing about keeping them, so much so, that some have been deterred from making them. But I consider them as easily kept as a Turnip, if they are managed right. The secret is a simple one. All secrets are simple when revealed, but it requires time, labor and experiment, frequently to discover them. Therefore, we do not meet with many revelations, as it is much easier to speculate than experiment.

Well, sirs, I lay the whole stress in digging before the frost, and after they are dug, put them up with dry dirt, sifting it from a shovel or spade upon every layer of Potatoes, until the cellar is full, or as near full as you wish, using the precaution not to cover them too deep on the top until the cold weather sets in, and then make them secure by putting hay or straw on, so as to keep the cold air from them, and never open your cellar when the weather is very cold, until about twelve o'clock, or the warmest part of the day, and according to my experience, they never have failed to keep. Potatoes always spoils in four or five days, after they are first cellared, if they spoil at all, unless they should get wet afterwards. In the spring, take off your covering of straw, as soon as the cold weather has subsided, which will keep them from sprouting in some degree. Respectfully,

JOHN P. SLEDGE.

Davidson County, Sept. 1842.

COTTON SEED.

We hope no subscriber to the Farmer, will show that he has profitted so little by the suggestions of ourselves and our correspondents, as to suffer his cotton seed to rot or be wasted, as they are now turned out from his gin. The labor required to build a shed over that part of the side of the gin house where the seed are cast, and to erect covered pens to remove them to when they accumulate too much, would hardly be worth speaking of, yet would be all that is necessary for preserving them. The farmer takes great pains to house his grain, his potatoes, his peas, &c., to keep them to feed to his stock; yet how often do we see cotton seed, whose value to cattle and hogs is scarcely inferior, bushel for bushel, to corn itself, be neglected and exposed to the weather to rot, and at most be used for manure? We believe the farmer who suffers his cotton seed to be wasted, loses at least a tenth of the value of his cotton crop; and a man who suffers a cow to die of starvation in the winter, with a gin yard full of rotten cotton seed, deserves scarcely less than to be starved himself.

PLANT PEACHES.

Let those who have peach seed which they wish to plant for an orchard, remember that now is the time to put them in the ground.

Planted in the fall, they will come up early the succeeding spring, —whereas if not planted till spring, they will not come up the first season at all, unless the stones are cracked, and then not certainly. Another thing to observed is, if possible, to plant the seed where the tree is intended to stand. Removing a tree, unless while very young, retards its maturity at least a year, and the tree never seems so vigorous or healthy. Where hogs would root up the seed, or from any other cause, you cannot plant them in the spot you want the trees, a good plan is to cover them in a tub or box of earth and keep properly moist during the winter, to be taken up and put in their permanent places early in the following spring.

Peach trees will grow on nearly any kind of soil, except one that is overflowed, but that which seems best to suit them is rather stiff, rich loam—that which suits them worst, a wet, hard clay.

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ADVANTAGES OF PULVERIZING THE SOIL.

The following short paragraph taken from the *Southern Planter*, contains so much sound, good sense, that we copy it with the view of asking all of our readers to study its truths and philosophy :

Pulverizing the Soil,—To demonstrate that dews moisten the land when fine, dig a hole in the hard dry ground, in the driest weather, as deep as the plough ought to reach ; beat the earth very fine, and fill the hole therewith ; and after a few nights' dews, you will find this fine earth become moist at the bottom, and the hard ground all round will become dry. Till a field in lands: make one land very fine by frequent deep ploughing, and let another be rough by insufficient tillage alternately ; then plough the whole field crosswise in the driest weather, which has continued long, and you will perceive, by the color of the earth, that every fine land will be turned up moist, but every rough land will be dry as powder, from top to bottom. In the driest weather, good hoeing procures moisture to roots; though the ignorant and incurious fancy it lets in the drought, and therefore, are afraid to hoe their plants at such times.

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FLOWER-POT BEE-HIVE.

Mr. Editor,—After all that has been said and written on the bee-hive, and the praises which have been sung in favor of the palace of several stories, the non-swarming, self-ventilating, moth-preventing, life-preserving structures, to the tune of more than twenty dollars a piece, perhaps there is one which will at length take the lead of all, in the march of bee-breeding, and that is, *the common garden flower-pot !* It is strong, warm in cold, and cool in hot weather, cheap, simple, convenient, and particularly neat in appearance; it is only necessary to take one of the largest size

for a breeding-*pot*, and when it is desired to add to the hive, to choose one of the next size, the mouth of which shall exactly fit the bottom of that below it, and open the hole; and immediately it becomes an elegant and neatly finished compartment, which might in this way be added to, forming a pyramid of most exact structure and elegant proportions, to any height required. A hole of entrance could be easily cut in the edge of the lower pot, or two holes pretty near together may be better; it might be placed close to the bottom board, or raised half an inch all round by small wedges, which might be preferable in hot weather—any how you might wish to fix it—and all, comparatively, at a very trifling expense; then taking away the upper pot, in case of its becoming full requiring only a cork with which to stop the hole of communication with the lower pot. Now, I calculate this plan of a hive will prove better adapted for the health of the bees than many highly finished domes of expensive workmanship, which, I have reason to know, the bees do not value *a cent;* for, after being at the expense of erecting one, which I thought would win the heart of the most fastidious bee that was ever created, and placing in it a swarm of the present season, they immediately left it; but being determined that they should stay, *nolons volens*, they were returned, merely to give them another opportunity to show that they were determined to have their own way: after this they were placed in a home-made box, where they are industrious and happy. A person who has fifteen hives, told me this day, that his strongest swarm inhabits the half of a salt-meat barrel, the only substitute for a hive which he possessed at the swarming of the bees, but which they have since filled with the choicest honey. Now as I have taken no patent for the *flower-pot hive*, it is at the acceptance of any of your numerous readers, only requesting those who make trial of it, to afford the editor the means of judging of the flavor of the honey made in an earthen pot instead of a box, which I have a notion will be found very superior. JOHN STARKEY.

June 19, 1842. *Farmer's Cabinet.*

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ALLOWANCE OF WATER TO HORSES.

It is by no means an uncommon notion that if horses are to be got into condition to work, they should be allowed to drink but a small quantity of water. On what physiological basis this opinion is founded, I confess appears to be a perfect mystery. Nevertheless, as many persons adopt this treatment, it is fitting to notice it. For my own part, I have ever found that it is an extremely bad plan to stint a horse in his water, and I have consequently always made a practice of leaving a plenty of it at all times within reach of every horse I ever had. Of course I do not intend to say that when a horse comes in heated from exercise, he should be suffered to drink, or should have a belly full of water just prior to being

ridden; but if a horse be watered *ad libitum* in the morning, he will not require to drink again for some hours, and should never be allowed to do so then, unless perfectly cool. Those horses that are only supplied with a limited quantity of water at a time, and are never permitted to slake their thirst fully, will be much more liable to be griped, if at any time they by chance should drink their fill, than those that are always suffered to take as nature dictates to them; but should a horse have been hard worked and come in to his stable very hot, I would, after having seen him well dried, only give him a small quantity, for two reasons: first, because his eagerness for water may lead him to drink more at a time than is good for him; and, secondly, because a large quantity of water will probably cause him to break out into a cold sweat in which he may remain all night, if not looked to. After having taken a third, or less, of a stable pailful of water he should be kept without any for some time, and then be allowed to take what he pleases. When, however, you intend to stint your horses in this way, do not suffer your groom to offer him a pailful of water, and to take it from him when he has drunk a small portion of it, but let just the quantity you wish him to have, and no more be given to him; he will then feel to a certain degree satisfied with what he gets; whereas by taking from him what he expects to have, he becomes fretful and discontented. In the first instance he makes up his mind to slake his thirst, with a short allowance of water; whereas in the second, his just expectations are baulked in mid career, and his imagination cheated as it were, in the height of his enjoyment—and there is much more in this than may be supposed. Physiologists are well aware of the connexion existing between the stomach and the brain; and those who have not inquired into this fact, must either do so before they attempt to refute it, or take what I have said as proved. *Sporting Magazine.*

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FATAL EFFECTS OF CASTOR OIL ON A HORSE.

To the Editors of the Tennessee State Agriculturist:

"A case has recently occurred in England, in which the death of a horse was evidently produced by the effects of a quart of castor oil given as a purgative. It operated powerfully: but the animal soon died. On examination, a large intro-susception of the jejunum was discovered, and the mucous membrane of the stomach and intestines exhibited marks of severe inflamation."

I lately met with the above in an old number of a medical journal, which brought to mind two cases that fell under my observation at Lexington, in Kentucky, in which the desth of two valuable horses was supposed to have resulted from the same article, administered to them in about the same dose as a purgative. Symptoms of violent intestinal irritation ensued, and after a few days the animals died apparently exhausted by the powerful purging. I

should give castor oil to a horse with great reluctance, and never if I could procure any other purgative. It is a pity that so little attention is bestowed upon the disorders of this invaluable animal, by men of sense and intelligence, and that they are so generally turned over, when they fall sick, to the tender mercies of the ignorant but most conceited horse leech. Respectfully,

Rutherford County, Sept. 1842. L. P. Y.

SWISS COWS IN HARNESS.

We took a drive yesterday up a most romantic valley, and met two peasants driving their cow in a little cart. They stopped to offer us some pears. I particularly remarked the cow, to see if working did her any harm; she was in excellent condition. I wish the cottager in England would adopt this custom; it never comes into his head that the cow can do anything but give milk. We know nothing of economy in England; what is daily wasted in it would save from starvation the miserable creatures who die in the streets. But what is everybody's business is nobody's, and so those who can afford it go on allowing waste.

Lady Vavasour's Last Tour and First Work.

DOG TRAP.

Messrs. Editors,—I have long esteemed my sheep the most convenient and profitable stock I raise, and should have greatly increased my flock but for the annoyance to which I am subjected, in common with my neighbors, from the dogs that surround us. Having heard of a trap for catching these thievish and murderous scoundrels, I have resorted to it with great success, and strongly recommend it to the consideration of my fellow sufferers. I simply make a pen of fenced rails, in an exposed situation, five or six feet high, narrowing it in towards the top like a partridge trap. A hole of two feet square is left open on the top, and the trap is baited with a quarter of unskinned lamb, or if necessary, a living animal is used as the lure to this insidious snare. The dog finds no difficulty in mounting the trap from the outside, and pouncing on his victim through the hole in the top, but when he has indulged his barbarous appetite, and desires to return, he finds the difference between a concavity and a convexity, and for the light he thus obtains in natural philosophy, he pays the forfeit of his life next morning.

My success on several occasions, has induced one or two of my neighbors to resort to the same remedy, which has heen equally efficient with them. Your Obt. Servt. JAMES RIVER.

[*Southern Planter.*

POULTRY YARDS.

Every farmer should supply his table chiefly with fresh meats from his poultry yard. By proper attention, it may also be made

a source of profit in addition. A yard of suitable size enclosed with pickets, including a poultry house, and a supply of fresh water, and a pond to wash in, are indispensable to the success of raising poultry.

To ensure a plentyful supply of eggs in winter, let the fowls have a warm habitation in which they can remain through the day in cold severe storms, with room to move about. Place a trough about four inches wide, and four inches deep, and length according to circumstances, within the yard, with a roof so low as to prevent their getting into the trough; keep this well supplied with feed, that they may have it by them constantly. In summer let them out once or twice a day to ramble awhile, if you have no crops near enough to be injured by their depredations. As they are somewhat carnivorous, some kind of fresh meat is necessary for them once a day in winter, when they are not supplied with insects.

No poultry is profitable to be kept after three years old. Something depends however, on the breed and the manner in which they are kept. The Poland top-knots are considered as the best for eggs and are sometimes called everlasting layers. They are more hardy than most kinds for the extremes of weather.

[*Conn. Farmer's Gazette.*

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TO DESTROY TICKS ON SHEEP.

Take Scotch Snuff, open the wool on the back of the sheep from head to tail, dust in a small quantity, so as barely to color the felt—do the same on the belly—pursue the same process by making a ring round the neck near the head, and another near the shoulders, and a fourth around the body near the flank of the sheep The odor of the snuff will diffuse itself, through the whole fleece in such a manner, as to destroy the ticks in the course of two or three days, and will not injure the sheep or the wool. In order to apply a suitable quantity and no more of the snuff, procure a tin pepper box, have a cap like a tunnel, with five or six holes at the small end of the cover—fill with snuff, then use it in the parted wool as you would the pepper box, if the old sheep was cooked for dinner. I can say from experience, this process will not fail of the desired effect.

—

MICE.

A correspondent of the *Genessee Farmer*, says:—"The best way of banishing rats and mice from mows or bins of grain, and all simi-places, we have heard of, is scattering the branches of *mentha viridis* or common spearmint, about in the mows when packing away grain, or strewing it over the bins of grain, casks of apples &c., exposed to their depredations. We have tried it, so have our neighbors, and found it to be effectual.

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